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S. HRG. 104-713, PT. 1

Senate Hearings

Before the Committee on Appropriations

Y 4. AP 6/2: S. HRG. 104-713/
PT. 1

Agriculture, Rural Development, and Related Agencies Appropriations

Fiscal Year 1997

104th CONGRESS, SECOND SESSION

H.R. 3603

PART 1 (Pages 1-1421)

COMMODITY FUTURES TRADING COMMISSION
DEPARTMENT OF AGRICULTURE
FARM CREDIT ADMINISTRATION
FOOD AND DRUG ADMINISTRATION

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE ONE HUNDRED FOURTH CONGRESS

SECOND SESSION

ON

H.R. 3603

AN ACT MAKING APPROPRIATIONS FOR AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES PROGRAMS FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1997, AND FOR OTHER PURPOSES

PART 1 (Pages 1-1421)

Commodity Futures Trading Commission
Department of Agriculture
Farm Credit Administration
Food and Drug Administration

Printed for the use of the Committee on Appropriations



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1996

23-975 cc

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

TUESDAY, MARCH 26, 1996

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:10 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.

Present: Senators Cochran, Gorton, McConnell, Burns, Bumpers, Kerrey, and Kohl.

DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

STATEMENT OF DAN GLICKMAN, SECRETARY OF AGRICULTURE

ACCOMPANIED BY:

RICHARD ROMINGER, DEPUTY SECRETARY OF AGRICULTURE

KEITH COLLINS, CHIEF ECONOMIST

STEPHEN B. DEWHURST, BUDGET OFFICER

OPENING REMARKS

Senator COCHRAN. The meeting of the Agriculture Appropriations Subcommittee will come to order.

Today we begin our hearings on the fiscal year 1997 budget request submitted by the President of the United States. Our hearing will deal with the provisions of the request for the Department of Agriculture.

This afternoon we are very pleased to have as our first witness in this series of hearings the Secretary of Agriculture, Dan Glickman. Mr. Secretary, we appreciate very much your cooperation with the committee, your being here, and providing us with a statement and information about the budget request of the President as it relates to the Department of Agriculture.

This subcommittee has appropriations jurisdiction for all programs and activities of the Department of Agriculture, with the exception of the Forest Service, which is funded by the Interior bill. For fiscal year 1997, the President requests total appropriations of \$57 billion, a net decrease of \$4.7 billion from the fiscal year 1996 enacted level. This includes an \$8.9 billion reduction from 1996 for the mandatory payment to the Commodity Credit Corporation for net realized losses. The President's total discretionary appropriations request is \$13.3 billion, an increase of \$446 million above the

fiscal year 1996 enacted level of \$12.8 billion. I expect that the best case will be that this subcommittee's total discretionary spending allocation for fiscal year 1997 is the same as the fiscal year 1996 level. It will probably be less. Given this, it will be important to understand, Mr. Secretary, what the Department's priorities are within such limitations.

The President's budget is predicated on the continuation of current law for the Department's commodity programs, but also for many of the rural development and research programs conducted by USDA. The conference agreement on the farm bill should end much of the problems farmers and the Department have faced with mixed and unclear interpretations of permanent law. Enactment of the farm bill will provide clear authorization and guidance for these programs for at least the next 7 years and should cause the Department to reexamine its budget estimates for fiscal year 1997 to see if any adjustments might be necessary.

As you could tell, I am not talking very well today. I have a little scratchy throat, so I am going to defer any further comments and yield to my good friend and fellow member of the committee from Kentucky, Senator McConnell.

STATEMENT OF SENATOR MCCONNELL

Senator MCCONNELL. Thank you, Mr. Chairman. I hope you will be OK.

Senator COCHRAN. I think I will.

HORSE DISEASE EQUINE PIROPLASMOSIS [EP]

Senator MCCONNELL. Mr. Chairman, I mentioned to the Secretary of Agriculture right before the hearing began my concern about an issue that is not entirely Kentucky-specific, but largely Kentucky-specific, and the issue is a disease called equine piroplasmosis [EP]. EP is a disease that horses contract through the tick population. The disease is not passed from horse to horse, but it is passed from tick to horse and from tick to tick. We do not have this disease in the United States currently. However, it is endemic in Europe.

We have been engaged, Mr. Chairman—and the Secretary is aware of this—in a number of discussions with his Department with regard to the importation of horses into the United States to compete in the Olympics in Georgia a few months down the road.

The horse industry in Kentucky is of enormous significance. What oranges are to Florida, potatoes are to Idaho, horses are to Kentucky. It is a major export. People come from around the country every year to the horse sales at Keeneland and Fasig-Tipton. I, along with others, have been involved in trying to break down barriers into Japan. The Japanese love racing. Even Hong Kong, which has the reputation for being the most open capitalist city in the world, has had restrictions until recently against American horses.

To make a long story short, what has now happened is the USDA, in conjunction with the Georgia Department of Agriculture, has decided to allow into this country European horses, some of which are EP positive, to compete in the Olympics with a variety

of arguable safeguards. The Secretary knows that I do not like the arrangement. I think the stakes are enormous.

In 1976 at the Olympics in Montreal, they simply chose not to grant waivers. I do not know whether they moved the events overseas or what they did, but they did not allow EP-infested horses to come in.

So, Mr. Chairman, when we get to questions, I am going to be asking the Secretary of Agriculture a series of questions about these guidelines that have been crafted. We hope they will protect the American horse population from this disease; however, the stakes are enormous.

There was a study done in Kentucky indicating that we have 80,000 people in my State who are involved in the horse business. So, it is very clear why it is important to us.

Mr. Chairman, I am going to ask that my full statement be made a part of the record.

I thank you for having this hearing, and I look forward to having a conversation with Secretary Glickman about this issue a little further into the hearing. Thank you.

PREPARED STATEMENTS

Senator COCHRAN. Without objection, the statement will be made a part of the record along with the prepared statement of Senator Kohl.

[The statements follow:]

PREPARED STATEMENT OF SENATOR MCCONNELL

Mr. Chairman, I wanted to thank you for holding today's important hearing, and I also thank Secretary Glickman for his participation.

I plan to focus my remarks and questions on one particular issue facing the USDA—partly because it is so urgent and the stakes are so high, and partly because it is an issue that goes to the core of what USDA's mission is all about.

I'm referring to the Department's recent decision to grant a waiver allowing the importation of horses infected with *equine piroplasmosis*, also known as EP, so that they may compete in the Olympic games to be held in Atlanta this year.

In my view, one of the most valuable services performed by USDA is protecting U.S. agriculture—both the industry and consumers—from the spread of foreign agricultural diseases and infected imported products. It is a point of pride that the U.S. has the toughest standards and requirements for hygiene, disease containment, quarantine, inoculation, crop inspection, and veterinary medicine—and that is one of the chief reasons why U.S. agriculture sets the pace in worldwide markets.

Based on that consideration alone, I am deeply concerned about USDA's actions in regard to EP-infected foreign horses.

But obviously, that's not the only reason for my concern. As a U.S. Senator from Kentucky, I am quite interested in the horse industry. In my State, breeding and racing thoroughbreds is big business. It employs thousands of people and contributes a great deal to Kentucky's economy and culture.

The Kentucky Derby, whose post-time is less than six weeks away, is a world-famous sporting event. Kentucky breeds, I'm pleased to say, have won 91 of the last 121 Derbys—and that's not just the home-court advantage at play.

The Keeneland and Fasig-Tipton yearling auctions are both international attractions. Together, they account for nearly half of all yearlings sold in the United States in 1994, not to mention hundreds, if not thousands, of top-quality horses sold to clients the world over.

To put it simply, horses are to Kentucky what automobiles are to Detroit, what oranges are to Florida, and what potatoes are to Idaho. They are more than a commodity, they are part of the culture. And that is why we take horses so seriously in our Commonwealth.

For that reason, the Kentucky horse industry has been very concerned since we first heard rumors that horses infected with the EP virus might be admitted to the U.S. to participate in the Olympic games.

For those here who may be unfamiliar with the EP disease, it is an infectious, tick-borne malady characterized by fever, anemia, weight loss and, in some cases, death. Thankfully, EP has been non-existent in the U.S., largely because of strict EP rules that have been in force in this country for 20 years.

In fact, our own horses must test negative for EP after they have competed abroad before they can be admitted back into the U.S., because we have a susceptible population of nearly 6 million horses. Further, the disease is spread not just from tick to horse, but from tick to tick. This means that there is a risk of infection even if the horses themselves are kept separate.

The ticks that commonly carry and transmit this disease are known to exist in Georgia, and tick season will be at its height during the time of the Olympics.

If that were not bad enough, the site of the Olympic events will be used for future equestrian activities, and if the disease becomes established in the tick population in that region, horses at the park and surrounding areas would be at serious risk of contracting and spreading EP.

In other words, what we are talking about is exposing the U.S. horse population to a serious disease which cannot easily be contained.

Now, it's true that infected horses can be treated with a type of chemotherapy. But such a course of treatment is very hard on the horse, and is not always successful. EP is endemic in most of Europe, but it is not in Japan—which also happens to be a growing market for Kentucky thoroughbreds. As someone who has worked long and hard to lift Japan's trade barriers to Kentucky thoroughbreds, I can guarantee that an EP outbreak in the U.S. would set back my efforts to open that market by at least 5 years.

I wanted to give you and the rest of the subcommittee this extensive background to explain why I am so upset at USDA's decision, made jointly with the Georgia Department of Agriculture and the Federation Equestre Internationale, to grant a waiver to EP-infected horses to come into the United States and compete in the 1996 Olympic games.

In fact, I have written to you twice already, expressing my concerns over the harm this action could cause Kentucky—not only in terms of sales and exports, but also for the thousands of Kentuckians who own horses and ride them for pleasure.

I have also heard from numerous individuals and groups that are concerned about the waiver issue, including: the Thoroughbred Owners and Breeders of Kentucky, the New York Thoroughbred Breeders, the American Association of Equine Practitioners, the National Association of State Departments of Agriculture (NASDA), the American Quarter Horse Association, and the Departments of Agriculture in Alabama and Georgia.

But, as you may know, I didn't stop with just writing letters. During the recent conference on the farm bill, I strongly urged our chairman—who has been very helpful in this matter—to include report language that expresses our great concern over this matter. I want to thank Senator Cochran for his assistance in confronting what may be the most serious health crisis facing the U.S. equine population today. Though I have been speaking primarily about Kentucky, it should be obvious that this is a disease that could spread rapidly and uncontrollably throughout the country, if we do not take every possible precaution to stop it at our borders.

Of course, I understand the sentiment of not wanting to interfere with the Olympic games. We want to be a good host; and I am aware of all the political pressure being brought from every side to give in and let the horses come into the country.

Well, I hate to be the spoiler, but I think the risk is just too great. I'm willing to let the games begin—but let the horses infected with EP stay home.

Mr. Secretary, I thank you again for your attendance here, and look forward to your comments on this and other issues today.

PREPARED STATEMENT OF SENATOR KOHL

Mr. Secretary, I appreciate your willingness to testify before this subcommittee today on the issue of the USDA's fiscal year 1997 budget submittal. As you've pointed out in your testimony, one of the unavoidable problems with this budget submittal is that the farm bill was not completed in time to factor into that budget. Much of what your agency will do in this next year will be dictated by the new programs and new directions laid out in the farm bill. Therefore, understanding the constraints that you faced in putting together this budget, I am hopeful that this subcommittee will be flexible and cooperate with you as we seek to put together the fiscal year 1997 appropriation bill.

In that context, I think it is important to note some of the provisions of the new farm bill that will factor very heavily into your work in this next year. Of particular

importance to my state are the dairy provisions of this farm bill, which I believe offer a very mixed message to farmers and to consumers.

On the one hand I am hopeful that the milk marketing order reform provisions of the final farm bill will give USDA the tools necessary to bring about greater regional equity in milk pricing policies, and to make the milk marketing order system more reflective of today's markets.

The final farm bill instructs you to consolidate and reform orders within 3 years, and essentially instructs you to do so without consideration to the existing price system established by the 1985 farm bill. I think that is a positive change, and I am hopeful this will bring about a marketing system that is more defensible in today's economy, and more fair to Wisconsin farmers.

However, I am stunned that another provision of the farm bill conference agreement goes in the complete opposite direction of market orientation by giving you the authority to grant consent to the Northeast Interstate Dairy Compact.

As you know, during Senate consideration of the farm bill, I was successful in striking the Northeast Dairy Compact from the bill. The majority of the Senate agreed with me that we should not be establishing what amounts to regional dairy cartels. And the House farm bill never did include the Compact. So it's hard for me to understand how a dangerous provision like this can appear in a conference report, when it has been clearly rejected by both Houses of Congress. In my mind, that's back room dealing at its worst.

And at the appropriate time, I will have a couple of questions for you about the farm bill agreement on dairy.

INTRODUCTION OF WITNESS

Senator COCHRAN. We thank you for your contribution to the work of this committee.

Mr. Secretary, I am going to ask you to proceed now and introduce those who are with you today at the hearing. We welcome all of you, the Deputy and other members of your staff. You may proceed.

STATEMENT OF SECRETARY DAN GLICKMAN

Secretary GLICKMAN. Thank you very much. Mr. Chairman and Senator McConnell, it is a pleasure to be here.

First I would like to introduce a special guest. We are engaged in a binational meeting with representatives of the Government of South Africa. We have a commission that Vice President Gore has set up with the Government of South Africa, and we're having our agriculture meeting. We have the Minister of Agriculture for South Africa who is here, Minister Van Niekerk. I would like him to stand up and be recognized. He is basically my counterpart in South Africa. He is an agriculturalist and he is very well respected. We have been talking about a variety of mutual issues.

I told him about my hearing and I said, would you come over and help me. He said, well, he would see. I do not know if he knows anything about horses, Senator McConnell, but he is here to possibly help me.

He is also a senator in their system. So, he occupies both capacities.

Both Senators obviously know Rich Rominger, our Deputy Secretary, and Steve Dewhurst, our Budget Officer. I think Steve has almost, if not the longest run, close to it, in Government in terms of being a budget officer, and he has been extremely helpful. Of course, our Chief Economist, Keith Collins, who has been before this committee.

I would say that you have an example here of—obviously, the Deputy and I are appointees of the President—very key career people who we work together with on issues of agricultural policy.

Before I talk about the 1997 budget proposals, I ask that my entire statement appear in the record, Senator.

Senator COCHRAN. It will.

PERSPECTIVE OF FIRST YEAR AT USDA

Secretary GLICKMAN. I would like to give you a little context from an oral perspective about my first year. It is almost 1 year I have been in this job, and I thought I would give you a little perspective about what it is like and then how it relates to the budget proposals.

After 18 years in Congress, I thought I had the hang of managing an institution, but moving from the Hill to USDA has been almost like going from the frying pan into the fire. The Department is a very big place with over 100,000 employees. Quite frankly, for a long time it has been run as if it were a confederation of separate independent entities that had very little to do with each other. Whether it was the Foreign Agriculture Service, rural development, the Forest Service, or the Food Nutrition Service, it was like running a big conglomerate with parts that had nothing to do with each other.

Managing as a corporation started before I was there. It actually started when Secretary Madigan was there in terms of trying to reorganize the place to make it function better. Our goal is to make the Department of Agriculture run more in a corporate style rather than in a confederation style so that there is some sense of unity. With thousands of employees, thousands of field offices, and decades of we have always done it that way attitude, the corporate style reorganization has not happened overnight.

Within the last several years, we had the first major streamlining and reorganization of the Department which is occurring largely under the purview of the Deputy Secretary. We have made tremendous progress, but the fact is that we have a long way to go.

When the size of Government goes down, so does the morale of Government employees. The first task I faced in my new job was trying to build morale that had suffered in recent years.

The second task I faced was to work on a new farm bill, a situation which I am sure we are both thankful is fairly close to resolution.

The third challenge has been to manage the U.S. Forest Service, which traditionally has taken very little of an Agriculture Secretary's time and attention. Nearly 40 percent of the employees in USDA are in the Forest Service, and while the Forest Service appropriation is not in this bill, my office spends extensive time on activities such as timber sales, the Endangered Species Act, and an assortment of other activities that one would not think historically belong in this Department. The administering of the Forest Service has perhaps, been the most difficult in terms of the conflicts and public policy issues between resource management, recreation, and conservation. That is something that, quite frankly, I did not anticipate at the time that I came into this job.

I believe, for too long, the Forest Service kept a separate, independent role, hoping that the Secretary would not interfere in its operation. However, that is changing and it has become a more tedious task, I am sure, than they had faced for some time. It is, however, a part of the operation of the Department.

Fourth, when I took this job, the President told me to focus on trade. He asked me to do whatever I could to sell agricultural commodities overseas. In terms of that particular part of my job, I have done my best to see us increase our exports. Last year, and this year, we have seen record export sales. As a matter of fact, we sold so much wheat to China just before my last trip, that some people suggested I just stay there. [Laughter.]

But the fact is that we are going to see maybe 60 billion dollars' worth of agricultural exports this year.

The issue of trade has been complicated in the post-GATT era by new kinds of what I call artificial trade barriers. One form is sanitary or phytosanitary restrictions that are not science based. We are facing a number of these barriers today. The Russian poultry issue, which I am glad to say, we think has been substantially resolved. The European Union's hormone ban on beef. China's 23-year ban on wheat from the Northwest citing the TCK issue. We believe that all these items are based on bad science. We further believe that items like these are going to continue as countries look for ways to protect themselves.

This brings me to the fifth thing that has kept me busy this year, reform of the meat and poultry inspection system. I told Congress my office would be personally involved in assuring the safety of our food supply. The outbreak of BSE in Britain underscores the need for additional funding to bring our meat inspection system up to the best scientific standards. We must do all we can to protect consumers. To do that, we need a scientifically sound, adequately staffed, meat inspection system, as reflected in our budget request.

We believe we have the safest meat and poultry inspection system in the world. However, if you look into the future over the next 5, 10, 15, or 20 years, there will be more worldwide problems dealing with sanitary and phytosanitary issues. We must keep the confidence of the American people, and the people in the world, that we have the safest system. To do that, we are requesting additional people to help us staff our meat inspection system so that the level of its quality will continue to assure the people that it is safe.

Now, I want to talk for a moment about a few management problems because these are things that I have seen.

USDA does important things that affect the lives of Americans in many ways, but this is a very difficult department to manage. We are not yet one department. We are trying to bring the agencies together but it takes time, it takes a change of mindset, and it takes resources. I will be the first to admit that we are trying to resolve some longstanding problems. Let me give you a couple.

USDA has a loan portfolio of \$110 billion. Of that amount, we have about \$3.5 billion in delinquent loans. One program, large farm loans, accounts for most of the problems, and we are working to fix it. We are setting up an institutional structure to try to collect some of those delinquent loans. The collection of delinquent

loans, however, still remains a very serious problem for the Department, as it does in all Departments in Government.

I am sure you have all heard about collect calls being billed to USDA from Lorton. We are being reimbursed and we are working with the phone company to avoid future abuse. The fact of the matter is, the Department is large and complicated in terms of organizational structure, computerization, and telecommunications. These are examples of things that are tough problems, especially from a management perspective. It requires a tremendous amount of attention.

I just wanted to go over some of these things with you in terms of what I have been doing, as well as, to describe the mood of the Department. It is within this context that we have set our budget objectives. As agriculture moves toward more market-oriented programs, what Government does outside the traditional commodity programs will become increasingly important. Our policy priority today should be to make sure that we put enough resources into research, trade development, conservation practices, and rural infrastructure to enable rural areas to participate in the growing world market.

FEDERAL GOVERNMENT'S ROLE

It also remains the role of the Federal Government to keep open access to world trade, to ensure research for new crops, to keep our soil sound, our water safe, our wildlife protected, to ensure the safety of our food, and to make sure that no American goes hungry.

We have tried to address and emphasize these priorities during the farm bill process, and now we would like to focus on these priorities during the appropriations process.

BUDGET OBJECTIVES

Our first budget objective is to implement the farm bill in a sensible way. This is not going to be easy. Changes in this bill are very significant and we are going to have to do a number of things very quickly. However, we cannot do that without adequate resources.

Congress is expected to complete action this week on a new farm bill and we expect the President to sign the bill shortly after that. That is the good news.

The bad news is that we did not have a farm bill against which to prepare our budget. We are now halfway through the fiscal year, and everyone agrees that the new farm bill will make dramatic changes in American agriculture. USDA faces tremendous administrative burdens in transforming current farm programs to meet the requirements contemplated under the conference report. We anticipate that these burdens will be the heaviest in the balance of fiscal year 1996 and in the first part of fiscal year 1997.

Clearly, we need to review the long-term impacts of the bill on staffing. After this transition period, we may be able to make savings in the way we deliver these programs. Let me give you one example.

The issue of how we deal with landlords and tenants under the market transition payments provisions is something that is going to require USDA to make regulatory decisions on because, properly so, the Congress did not micromanage that in the bill. This is a

new phenomenon. You may have farmers who decide not to plant for a while. The issue then is who gets these transition payments when in fact there may not be any farming occurring. That alone is going to take tremendous staff time. It has great potential for litigation; therefore, we have to do it right.

Another issue is rural development. It is at the top of our priority list for the coming year. We are the only Federal agency with a primary focus on rural America. What happens to rural America affects what happens to the rest of the country. Rural America covers 83 percent of our land and is home to 21 percent of our people. We believe we need to increase funding for the infrastructure of rural America, in addition to rural clinics, affordable housing, water and sewer systems, healthy natural resources, access to communication, and credit. That is one of the reasons we pushed for the fund for rural America which the Congress authorized in this particular farm bill. It is also one of the reasons why we believe that rural development issues should remain a very high priority, particularly water and sewer systems which need to be replaced all over the country, which you know better than I do.

It is our responsibility to help farmers make the transition to a more market-based agriculture. To do that, we must continue to invest in rural development and research. American agriculture is the most competitive in the world and we remain competitive because of the quality of our research. The Karnal bunt situation involving a wheat fungus that is in the Southwest part of this country, is a perfect example of why we do what we do. Our research will enable us to analyze it and determine how best to protect the rest of agriculture from it.

We need science-based responses to the Russian poultry situation and the European beef hormone ban.

Trade and food safety continue to be top priorities, and again research is essential to keeping our products competitive and our food safe.

BUDGET PROPOSALS

With these comments in mind, I want to briefly mention a few items in our budget proposal. The budget was developed under very tight funding constraints. To order our priorities, we made hard decisions on spending, on requiring further employment cuts, absorbing part of the increased pay and other inflationary costs, and working to change the way we do business.

Again, I want to emphasize this budget was prepared without a new farm bill in mind. Obviously, we may have to reexamine some parts of the budget once the new farm bill becomes law. But I must repeat, for the next 12 months at least—and that is a guess—we are going to be in the process of implementing the most major changes in farm policy legislation in the last 50 years. Therefore, we have to do it sensibly and we have to make the farmers and ranchers of this country a part of this process. This will help to ensure their support and confidence that we know what we are doing.

The request before this committee for discretionary budget authority is \$13 billion compared to \$12.8 billion for the current estimate for 1996, excluding emergency supplementals. The increase from 1996 is the result of a \$100 million reserve for the WIC pro-

gram, a shift of \$75 million from mandatory to discretionary spending for crop insurance delivery expenses, and additional funding for rural development activities.

We have also submitted a 1996 natural disaster emergency supplemental to address flood and storm damage in the various parts of this country.

We have asked for additional funding for the Food Safety and Inspection Service and the Agricultural Research Service. As I just previously mentioned, the BSE, or mad cow, problem in Britain underscores our need for additional funding to bring our meat and poultry inspection system up to the best scientific standards.

Some highlights of the budget proposal include a \$9.8 billion program level for loans and grants for rural housing, utilities, and business programs—that is up by about \$2 billion over the 1996 program level. This is attributed mainly to substantially lower interest rates which have in turn reduced the interest rate subsidy charged by Treasury. This means that we will be able to make available about 20 to 25 percent more dollars for loans and grants related to infrastructure improvements of water and sewer programs and some of the housing programs.

The budget also provides for a modest increase for our greenbox programs which will strengthen the level of farm and ranch exports, increases in funding for conservation programs, including additional acreage in the Wetlands Reserve Program, full funding for a nutrition safety net for needy Americans, including WIC increases to provide moneys for those who are in need. We are also proposing contingency funds for food stamps and WIC to ensure adequate funding even if food prices increase. We have additional investments in research, our national research initiative, and we are participating in the administration's Everglades restoration initiative through our research programs.

As I mentioned earlier, we continue to place a high priority on improving the meat and poultry inspection system. We are proposing a \$20 million increase over the enacted 1996 level to fund implementation of pathogen reduction and the HACCP programs. Consistent with our 1996 proposal, we are requesting that beneficiaries of our meat and poultry inspection services be charged a fee to cover the cost of overtime.

I am not going to read any more of that statement. I would say again that the meat and poultry issue is one that should be of great concern to us. I have repeated this over and over again. We have got the safest meat and poultry inspection in the world in this country, but we are improving it. Public confidence in that system can be shaken in a second by a catastrophe of the kind that is happening in Britain right now that can happen anywhere in the world. So, we need to do whatever we can sensibly in order to keep the American people believing that our system is, in fact, the safest in the world which I believe does merit the additional increases we have asked for concerning our food safety and inspection system.

So, with that, Mr. Chairman, I thank you very much for allowing me to make these comments today, and I would be pleased to answer any questions that you may have.

PREPARED STATEMENT

Senator COCHRAN. Thank you, Mr. Secretary. We have your complete statement, and it will be made part of the record.
[The statement follows:]

PREPARED STATEMENT OF SECRETARY DAN GLICKMAN

Mr. Chairman, Members of the Committee, it is indeed a privilege to appear before this Committee as the Secretary of Agriculture to discuss the 1997 budget for the Department of Agriculture (USDA).

Today, I would like to focus on our 1997 budget proposals. But, first, I would like to thank and congratulate the Committee for all of its hard work in gaining passage of the 1996 Agriculture Appropriations Act. As a result of your timely actions, most of the Department's programs and activities were unaffected by the funding hiatus that most of the rest of the Government faced. We are very grateful for your efforts.

On February 5, 1996, President Clinton submitted his 1997 Budget to the Congress. The President's budget has two basic objectives. It reaches balance in 7 years, making real cuts in entitlement and discretionary spending while providing modest tax relief. It also maintains a commitment to economic growth and to protect the most vulnerable Americans. The President's budget also stresses the importance of international trade, environmental protection, investments in research, education, and rural infrastructure as well as cutting the size of Government. USDA's budget reflects these same themes.

Before I discuss the details of our budget request, I would like to update you on the progress of our reorganization and streamlining efforts at USDA, and make some comments on agricultural policy and the future for agriculture in this country.

USDA Reorganization

As you know, USDA is at the forefront of the Administration's effort to develop a more responsible government, a government that works better and costs less. The Department's reorganization act was signed into law on October 13, 1994, and much progress has been made. The Department has consolidated 43 agencies into 29 to organize along mission lines, reduced its work force by 10,000 staff years since 1993, and consolidated administrative functions within mission areas. As mandated by the Reorganization Act, the National Appeals Division and the Office of Risk Assessment and Cost-Benefit Analysis have been established, and new Directors appointed. Both organizations perform roles critical to the Department.

In addition to headquarters changes, about 500 county-based field office locations have been closed or moved. Our goal is to eliminate a total of almost 1,200 locations by replacing the former 3,700 field locations with about 2,500 USDA Service Centers over the next 2 years. In addition to the Service Center initiative, several other USDA agencies are closing or consolidating offices and research laboratories to realize greater efficiencies in their operations.

As a result of reorganization and streamlining the Department is still expecting to reduce Federal employment by over 13,000 staff years by 1999 from the 1993 base and achieve savings of \$2.8 billion in personnel costs and \$1.3 billion in other administrative costs.

Also, as part of the President's Reinventing Government Initiative, USDA is now in the process of easing the regulatory burden on the public by eliminating more than 1,700 pages of the Code of Federal Regulations, and we are revising or simplifying more than 2,000 pages. In 1997, we will continue to work on this important initiative.

Agricultural Outlook

As I said at USDA's recent Agricultural Outlook Forum, I am extremely optimistic about the future of American agriculture. I am optimistic because I know we have a fundamentally strong farm economy:

- Farm prices for many commodities are the highest in many years.
- Cash receipts for farmers are at record highs.
- The value of agricultural exports is up 31 percent in fiscal year 1995 compared to 1990–1994, and 1996 exports are projected at a record \$60 billion.
- Government spending in farm price and income support programs is the lowest since 1981.

As the rest of the world becomes more prosperous and as population grows, demand for U.S. agricultural products should remain strong. Our producers should continue to benefit from these trends over the long-run.

I need to temper this optimism with a caveat. Not all commodities and not all producers are benefiting. Livestock producers are having a difficult time and some producers have suffered crop losses. Some segments of agriculture, including livestock producers, have also raised concerns about the effects of concentration on small producers and how USDA could do more to facilitate competition among packers, processors, shippers and retailers. To address these issues, I have established a 21-member Agricultural Concentration Advisory Committee. The members represent producers, industry, economists, and other representatives of the agricultural community. They will develop recommendations for possible actions to ensure competitive agricultural markets by June 1996.

As agriculture continues to move away from restrictive government programs to more market-oriented ones, what government does outside the traditional commodity programs will become increasingly important. Our policy priority today should be to make sure we put enough resources into research, trade development, conservation practices and rural infrastructure to enable rural areas to participate in the growing world market. It also remains the role of the Federal Government to keep open access to world trade, to ensure research for improved pest management and new crops, to keep our soil sound, our water safe, our wildlife protected, to ensure the safety of our food and to make sure no American goes hungry.

We have tried to address and emphasize these priorities during the Farm Bill process and now we would like to focus on these priorities during the appropriations process. This Committee can play a key role in helping American agriculture reach its true potential. We all know the severe budget limitations we are working under to reach a balanced budget in 7 years. This makes the setting of priorities I have outlined all the more important. The Congress and the Administration need to work together so that we can make progress in meeting the needs of our producers, consumers and rural residents.

With these comments as background, I would now like to address our budget proposals.

This budget was developed under some very tight funding constraints. Thus, in order to focus on the priorities we believe are most important, it was necessary for us to make some hard decisions to restrain, reduce, and redirect spending in a number of areas, to include some new user fee proposals, to ask for further employment cuts in most major agencies, absorb part of the increased pay and inflation costs and change the way we do business. I should also point out that the budget was prepared without the benefit of knowing what the new Farm Bill would contain, thus, we may need to reexamine some parts of the budget once requirements of new farm legislation are fully known.

The budget proposes \$59 billion in budget authority for 1997, compared to \$54.1 billion for the current estimate for 1996. The request before this committee for discretionary budget authority is \$13.0 billion compared to \$12.8 billion for the current estimate for 1996 excluding emergency supplementals. The increase from 1996 is the result of a \$100 million reserve for the WIC program, a shift of \$75 million from mandatory to discretionary spending for crop insurance delivery expenses, and some additional funding for rural development activities.

We are requesting a 1996 emergency supplemental of \$228.6 million of which \$148.6 million is for agricultural programs and \$80 million is for the Forest Service, to provide financial assistance for recovery from flood and storm damage to watersheds, farmland, national forests, and rural communities in the Pacific Northwest, the Northeast and other parts of the country. We are also requesting 1996 supplementals of \$9.5 million for the Food Safety and Inspection Service to assure that resources are available to fully support our inspection systems and to begin to modernize those systems and \$2.5 million for the Agricultural Research Service to provide additional support for the U.S.-Israel Binational Agricultural Research and Development Program. A rescission of \$12 million in buildings and facilities funding is proposed to offset these non-emergency supplementals.

FARM AND FOREIGN AGRICULTURAL SERVICES

The establishment of the Farm Service Agency (FSA) and the consolidation of staffs and county offices continues to be a major focus of our efforts at streamlining the Department and improving services. FSA is a large agency and in 1997 it is projected that FSA will administer a program of \$3.2 billion in farm credit loans and guarantees, \$2.4 billion in crop insurance, \$2.0 billion in conservation programs, and the multi-billion-dollar programs of the Commodity Credit Corporation (CCC). FSA also provides administrative support for our Foreign Agricultural Service under a reimbursable agreement.

The workload for FSA will be dependent in part on the programs it will be required to administer in 1996 and 1997 as a result of new farm legislation. The budget proposes \$1.1 billion for administrative support for FSA. This represents a small increase from the 1996 level largely to cover additional mandated crop insurance delivery expenses.

Resource requirements for FSA administrative responsibilities will be reevaluated once new farm legislation is enacted and its requirements assessed.

We intend to continue to press forward with establishment of Field Office Service Centers and attendant efforts to enhance services and improve efficiency in the face of ever tightening budget and staffing constraints.

Farm Credit Programs

The Department's farm credit programs continue to serve as a vital source of credit for our Nation's farmers and ranchers. Over the last two decades or more, these programs have changed significantly. No longer are they limited to direct lending. Guarantees of loans made by private lenders now comprise the bulk of activity. And, far more attention is being paid to repayment ability and adequate security. The substantial losses that have been incurred in recent years are due almost exclusively to loans made in prior years—as far back as the 1970's.

The 1997 budget provides for a total of about \$3.2 billion in farm credit programs loans and guarantees, which is about the same amount as 1995 and 1996. Of this amount, \$1.75 billion would be unsubsidized farm operating loan guarantees; \$250 million, subsidized farm operating loan guarantees; \$445 million, direct farm operating loans; \$650 million, unsubsidized farm ownership guarantees; and \$50 million, direct farm ownership loans. The amount available for direct farm operating loans would be less than the level that is expected to be supportable with the 1996 appropriation—by about \$134 million.

The emergency loan program is proposed for termination because farmers with disaster losses can receive assistance under the regular farm operating and farm ownership programs. Because the vast majority of emergency loans are made to cover crop production losses, farmers' losses are also likely to be covered under the federally subsidized crop insurance or non-insured assistance payments programs. Termination of the emergency loan program was proposed in the second report of Vice President Gore's National Performance Review.

I want to make note of two increases that are modest in size but important in impact. First, the budget provides for \$50 million in credit sales, which would require about \$5 million in budget authority. Congress has not funded this program since 1994 and as a result the Department has been at a disadvantage in trying to meet its commitments under current law to give priority in the sale of inventory property to various categories of purchasers, including beginning farmers and ranchers. Moreover, Congress appropriated only \$1 million in 1996 for grants to provide outreach and technical assistance for the socially disadvantaged, and directed that the Department conduct a study of the program. The budget requests that the program be restored to a funding level of \$3 million. In support of this request, the Department will submit its report to Congress within the next few weeks.

Risk Management

The newly reformed crop insurance program has, in my opinion, met the expectations of Congress and the Administration. While there may have been some start-up problems, the fact is that about 80 percent of all 1995 crops were covered by crop insurance. More than half of this coverage was at the additional coverage levels purchased through private insurance companies. But, even at the catastrophic risk protection coverage level, which provides coverage at 50 percent of the approved yield indemnified at 60 percent of expected market price, the Nation's producers are protected from devastating losses and do not need to rely on ad hoc disaster assistance as they have in the past. Where crop insurance is unavailable, there is permanent authority for a noninsured crop disaster assistance program, which is comparable to catastrophic risk protection coverage but requires a 35 percent area-wide loss as well as a 50 percent individual loss to trigger a payment.

Preliminary indications show that the program operated within the 1.1 loss ratio required by Congress for crop year 1995. This level of performance is also projected to continue for crop years 1996 and 1997.

The 1997 budget provides full funding for continuation of the insurance program. In accordance with the reform legislation, reimbursements to private companies for administrative and operating expenses will be limited to 29 percent of premium, as opposed to the current 31 percent for 1996. Further, unlike 1995 and 1996 when the entire reimbursable amount could be paid out of the mandatory Federal crop insurance fund, the reform legislation limits the portion that can be paid out of the

fund for sales commissions to agents in 1997 to only 8.5 percent of premium. It is estimated that this limitation will require \$75 million in discretionary funding for sales commissions. The budget requests an appropriation of "such sums as necessary" for this funding. Such an appropriation avoids restriction in program participation if specific amounts appropriated are insufficient. Restrictions on participation in the insurance program would undermine efforts to promote insurance as the primary risk management program. The budget also requests that "such sums as necessary" be appropriated for premium subsidy and other expenses paid out of the fund. The budget also assumes that FSA will continue to have a role in the delivery of crop insurance along with private companies. The Administration supports a dual system and opposes a provision in the Farm Bill being debated in Congress that would eliminate FSA delivery.

Conservation Programs

The Conservation Reserve Program (CRP) is the major conservation program administered by FSA. Under this program, producers receive annual rental payments, usually for a 10-year period, to remove highly erodible cropland and other environmentally sensitive land from production. Participants also receive cost-share assistance to establish a cover crop on the land. A total of about 36.4 million acres have been enrolled in CRP since it was initiated in 1986. The program has produced significant environmental and economic benefits and its continuation remains one of the Administration's top priorities.

In December 1994, the Department announced a series of intended actions to extend and modify CRP including offering program participants the opportunity to terminate contracts prior to scheduled maturity dates. This "early-out" option was important in improving the program's targeting and flexibility by allowing the opportunity to bring in more environmentally sensitive acres under new 10-year contracts. CRP participants took advantage of this first "early-out" opportunity by removing 684,000 acres from the program and replacement acres have already been accepted into CRP as a result of the 13th signup held last September. On January 25, 1996, due to tight crop supplies, I announced that the Department will again offer an "early-out" option for certain producers whose contracts expire on September 30, 1996. Acreage will have to meet certain eligibility criteria in order to ensure that environmentally sensitive land is protected for the full term of the contract. Rules governing the "early-out" option have been published in the Federal Register and signup dates have been announced for March 20–April 26. In addition, CRP contracts expiring on September 30, 1996, may be extended for one year.

The budget request reflects these changes as well as our intention to hold an additional signup for nearly 1.6 million acres in calendar year 1997 as mandated by the Appropriations Act for fiscal year 1996. This signup would bring total enrollment to 38 million acres. Although uncertain, preliminary estimates are that just over 1 million acres will be accepted under the new early release option and that 77 percent of expiring contracts will be extended for another 10 years if an extension is offered.

FSA also provides cost-share assistance to landowners to restore and protect agricultural land and water resources under the Agricultural Conservation Program (ACP) and to assist in rehabilitating farmland damaged by natural disasters under the Emergency Conservation Program (ECP). Funding for ACP is requested at \$75 million, the same funding level made available by the Congress in 1996. FSA will accelerate efforts to target resources toward priority goals in 1997. We are not requesting funding for ECP; however, supplemental funding of \$30 million is requested in 1996 for ECP to assist with flood damage in the Pacific Northwest and other areas.

Commodity Programs

Domestic farm commodity price and income support programs are administered by FSA and financed through CCC. CCC outlays are now the lowest in 15 years. They have steadily declined from a high of \$26 billion in 1986 to \$6 billion in fiscal year 1995. This has resulted from legislated program reforms and growth in demand, particularly for exports.

CCC net outlays for 1996 are estimated at just over \$3 billion if the statutory authorities that were applicable to the 1995 crops were to be continued for 1996. Our estimate for 1997 under these assumptions is less than \$4 billion. CCC programs have traditionally functioned as a countercyclical safety net to offset wide fluctuations in farm commodity prices and farm income. Outlays under the traditional program provisions are heavily influenced by weather, changes in foreign markets, and other uncertain events affecting prices and farm income. These factors have made CCC outlays difficult to predict in advance with accuracy. Future outlays would be

more predictable if farm programs providing for fixed market transition payments are enacted. However, as program outlays become more stable under a fixed payment scheme, farm income may become even less stable since the safety net effect of our programs would be diminished.

Our 1997 budget estimates were prepared without the benefit of knowing what farm program provisions will be in effect for the 1996 and later crops. Since new farm legislation was not enacted by the time the budget was prepared, estimates were prepared using the assumption that the programs authorized in amendments made by the Food, Agriculture, Conservation, and Trade (FACT) Act of 1990 to the Agricultural Act of 1949 and the omnibus budget reconciliation acts of 1990 and 1993 would be continued. Legislation which replaces major portions of those programs with fixed payments under long-term market transition contracts was pending when this statement was prepared. Due to the lateness of new farm legislation it has been necessary to take the initial steps toward implementation of the permanent statutory provisions of the Agricultural Act of 1949 and the Agricultural Act of 1938 for these programs. The mandatory programs for wheat and feed grains under permanent law would increase CCC outlays by an estimated \$10 to \$12 billion for the 1996 crop with much of the impact occurring in fiscal year 1997. If we were forced to implement all of the commodity programs under permanent law, total fiscal year CCC outlays would likely soon reach the \$15 to \$20 billion range.

International Trade and Export Programs

Mr. Chairman, I am certain you and other Members of the Committee and our agricultural producers are encouraged as I am with the latest Department projection that U.S. agricultural exports will again set a record this fiscal year at \$60 billion. This represents an increase of 38 percent over the level of just 2 years ago. While some of this increase in export value is attributable to higher prices, particularly for grains and oilseeds, we are also expecting growth in export volume for certain product categories, including wheat, meats, and horticultural products.

These projections are particularly heartening because the future of American agriculture is so highly dependent on international trade. The reason for this is easily understood when one considers that 96 percent of the world's population lives outside the United States. With ever-increasing productivity in our agricultural sector, most of the growth in demand for increased U.S. production is going to have to come from overseas rather than from here at home. Moreover, the importance of international markets for American farmers and ranchers can only be expected to increase as we undertake further reforms in our domestic farm programs, including reduced reliance on Government payments to support farm income. Given these factors, it is clear that future growth in farm income is directly tied to our continued ability to compete and sell in the international marketplace.

Over the past year, we have continued our vigorous efforts to assist America's farmers and ranchers gain improved access to overseas markets and to expand their export sales. With provisions of the Uruguay Round Agreement and North American Free Trade Agreement now in effect, much of our effort has centered on making sure those provisions are being implemented fully and fairly. The Clinton Administration's recent decision to pursue dispute settlement procedures in the World Trade Organization against the European Union's ban on imports of U.S. beef produced with growth hormones is a prime example of the follow-up efforts that will be needed to gain full compliance with these agreements.

The international marketplace remains highly competitive and, if we are to take full advantage of sales opportunities that are emerging as these trade agreements are implemented, it is critical that we maintain our commitment to export promotion and foreign market development efforts. Our 1997 budget proposals are designed to do so by providing a total program level of nearly \$8.0 billion for the Department's international programs and activities. Again this year, our proposals include increases in a number of our export promotion activities in keeping with the Administration's commitment to increase the program levels of "greenbox" and other GATT-consistent export promotion programs during the 1995-1998 period.

For the CCC export credit guarantee programs, the budget includes a total program level of \$5.5 billion. In last year's budget, we proposed the implementation of two new export credit activities—supplier credit guarantees and facilities financing guarantees—and these are again included in our 1997 proposals. Supplier credit guarantees, which are a component of the Administration's "greenbox" initiative, will allow exporters of U.S. agricultural products to obtain CCC guarantees for short-term credits extended directly to foreign buyers. These credit guarantees are expected to be particularly useful in facilitating sales of processed and high value products. The budget proposes that \$250 million of supplier credit guarantees will be made available in 1997, an increase of \$150 million over 1996. For facilities fi-

nanancing guarantees, the budget proposes that \$100 million be made available in 1997. Under this activity, CCC will provide guarantees to encourage the sale of facilities and/or U.S. goods and services to address infrastructure barriers to increasing sales of U.S. agricultural products in overseas markets.

Uruguay Round Agreement commitments require that agricultural export subsidies be reduced over a 6-year period. The 1997 program levels for the Department's export subsidy programs—the Export Enhancement Program, Dairy Export Incentive Program, and Sunflower and Cottonseed Oil Assistance Programs—reflect the second year of these reductions. Thus, the budget provides funding for these programs at the maximum levels which are consistent with the quantity and expenditure reduction commitments required by the Uruguay Round Agreement.

For Public Law 480 foreign food assistance programs, the budget proposes a total program level of just over \$1.1 billion in 1997. This is expected to provide for approximately 3.2 million metric tons of commodity assistance, just below the current estimate for 1996 of 3.4 million metric tons.

The Foreign Agricultural Service (FAS) has the important responsibility for administering the Department's trade and export programs. Last year's budget requested increased funding for FAS to expand a number of its trade and export promotion programs as part of the Administration's "greenbox" initiative. Again this year, we are requesting increased funding for FAS consistent with this initiative. Our proposals provide \$137.1 million of direct appropriated funding for FAS, an increase of almost 10 percent over 1996. The proposed increase will support an expansion in the agency's overseas counselor/attache and trade offices, as well as its foreign market development activities. These include funding for the Federal/State Market Improvement Program to provide matching grants to States to develop innovative marketing techniques for use in international markets and a new Distributor Development Program to develop marketing strategies for specific groups of agricultural products in fast-growing overseas markets. The budget also includes an increase in FAS funding for the Foreign Market Development Cooperator Program, which will be awarded on a competitive basis, and continues funding for the Market Promotion Program at its fully authorized level of \$110 million.

RURAL ECONOMIC AND COMMUNITY DEVELOPMENT

Rural development encompasses how people live in rural America—the kind of housing they occupy; whether they have access to such amenities as running water, electricity, and telecommunications; and the strength of local economic activity that affect their prospects for finding a job that will allow them to earn enough income to have a decent standard of living. The Department's rural development programs provide financial and technical assistance for a variety of specific purposes. President Clinton's 1996 budget included a proposal for combining 14 of these programs into a performance partnership to provide more flexibility for funding local priorities through these programs, and to place more emphasis on strategic planning. This proposal is repeated in the 1997 budget. I am pleased with the progress that has already been made toward implementing the performance partnership proposal. The 1996 appropriation adopted a portion of this proposal by combining the funding for rural water and waste disposal loans and grants and solid waste grants.

I am concerned, however, about the deep cuts that Congress made in the rural development area in the 1996 appropriation. In particular, funding for the water and waste disposal program was cut by over 20 percent. This has made it especially hard for rural communities that must rely on the program. There is a substantial backlog of applications and, without additional funding, many rural communities have to forego facility improvements to provide even such a basic necessity as clean running water. Opportunities to bring running water to the 400,000 rural households that lack complete plumbing will be limited under current funding levels. That is why I have supported the creation of the "Fund for Rural America" which would provide funding to supplement the amounts appropriated for the rural development as well as the research programs.

But, we should not overlook the opportunity to restore and even increase the rural development programs through the appropriation process. Recent reductions in interest rates have been "good news" not only for U.S. agriculture and industry and the consumers, but also for the Federal Government. Lower interest rates translate into less subsidy cost for most Federal direct loan programs. In the rural development area, the impact has been fairly significant. This can be expressed in terms of the overall program level reflected in the 1997 budget for rural development—roughly \$9.8 billion, a substantial increase over the \$7.8 billion level that can be supported with the 1996 appropriation. Yet, the 1997 program level can be supported by an appropriation of about \$2.2 billion, which is only slightly higher than

the \$2.1 billion appropriated for 1996. I would also point out that the Department has also been busy making program improvements, such as a new centralized system for servicing housing loans, to ensure that subsidy rates are kept to the minimum necessary to meet program objectives.

As for the details of the 1997 budget request for rural development, I want to go back to what I said earlier about the performance partnership proposal. Under this proposal, funding for 14 of the rural development programs including the water and waste disposal program, most of the rural business programs, and a portion of the multiple family housing program would be combined, providing flexibility for shifting funds among programs. Accordingly, the levels for each program that are reflected in the budget are based on assumptions as to how the funds would be used and may change, depending on program demand. Under our proposal, funds may be shifted up to 25 percent among the 3 programmatic "streams" within a State and up to 10 percent nationwide.

Rural Utilities Service

Without the Department's rural utilities programs, much of rural America would have been unable to obtain, at a reasonable price, basic infrastructure such as electricity, telephone, and water and waste disposal services. In earlier times, progress was measured in terms of the number of farms and rural households receiving any level of these services. Today, the primary need is to help assure quality infrastructure and service at a reasonable price so that rural America can keep pace with modern technology and clean water requirements.

The 1997 budget provides for \$1.8 billion in electric and telecommunications loans compared to \$1.6 billion in 1996. The increase includes \$35 million more for 5 percent interest direct loans for electric distribution systems and \$100 million more for electric loans made through the Federal Financing Bank.

There would be \$175 million in loans made by the Rural Telephone Bank, the same as 1996. The budget does not repeat last year's legislative proposal to accelerate privatization of the Bank. However, the Administration will continue to work with the industry toward achievement of this goal. The equity fund of the Bank continues to grow and by the end of 1998 we estimate sufficient funds in this account to buy out the Government-owned stock in the Bank and, thus, achieve privatization under current law. This option is being examined in a study the Department is conducting in response to a Congressional directive received during the course of the 1996 appropriation process. The Administration will propose legislation this summer to facilitate privatization in fiscal year 1998. We want to begin a dialogue with Congress on this issue.

With regard to the distance learning and telemedicine program, the 1997 budget includes \$20 million for grants, compared to only \$7.5 million available for 1996. Further, it repeats the proposal made last year to authorize loans under this program, for which the budget includes \$125 million for 1997. This program encompasses two of the most useful applications of modern telecommunications—education and medical services. Applications for the program are well in excess of current funding and there is strong evidence that a substantial number of these applicants could afford to repay a loan and, thus, do not need grant assistance. A loan program could leverage a relatively small amount of Federal funds toward meeting a significant portion of this demand. Yet, many of the applicants cannot obtain full funding from private sources.

The opportunities to serve rural America through this program are tremendous. The impact of those projects that have already been funded extends well beyond the immediate consumers. They provide an example to others of what can be achieved and allow private lenders to gain confidence in financing such services.

The water and waste disposal program is also one of the Administration's highest priorities for additional funding. As mentioned earlier, Congress reduced funding for this program in 1996 by over 20 percent. The 1997 budget restores this cut. It would provide for \$800 million in loans and \$590 million in grants. At this level, it would be possible to make significant progress toward meeting the Administration's Water 2000 initiative of providing running water to all rural households by the year 2000. Currently, there are about 400,000 rural households that lack such a basic amenity as complete plumbing. Water 2000 is already addressing this need by targeting funds that are currently available for water and waste disposal loans and grants to the more remote and poverty stricken rural areas. But, targeting alone will not be sufficient. More funding must be provided. Consistent with the 1996 Appropriations Act, we are also evaluating WIC carryover for transfer to this program. The budget assumes that \$36 million will be transferred in 1996.

Rural Housing Service

For rural housing, the 1997 budget provides for about \$1.3 billion in direct single family housing loans. These loans go to low and very low income families. Families with higher incomes are served through unsubsidized guarantees of loans made by private lenders. The budget provides for \$2.4 billion in such guarantees, which is \$700 million more than 1996, and includes \$100 million to be set aside for current direct loan borrowers who can afford to obtain private credit for refinancing. The budget also provides for \$75 million in direct loans for the sale of inventory property.

The rural rental housing program would be increased from just over \$150 million in 1996 to \$220 million in 1997, and rental assistance payments, most of which is needed for the renewal of expiring contracts, would be maintained at the \$540.9 million level. The budget assumes that legislation will be enacted to extend and reform the rural rental housing program to make it more cost-effective.

The rest of the housing and community facility programs would also be maintained at or close to their 1996 level, except for mutual and self-help grants which would be increased from \$12.6 million in 1996 to \$26 million in 1997.

A major initiative in the management of the housing programs will be implemented in 1997—the centralized servicing of single family housing loans. This initiative is expected to save over \$250 million in the next 5 years. Starting October 1, 1996, new loan originations in two States will be put on a new accounting system, to be known as DLOS (Dedicated Loan Origination and Servicing). All States will be originating loans on this new system by July 1997. These loans will be served by a unit to be located in St. Louis, Missouri. This system also allows the Department to begin escrowing for taxes as required by law. Conversion of the existing portfolio is scheduled to begin in February 1997 and completed by October 1, 1997.

The importance of this initiative cannot be overemphasized. The quality of service to single family borrowers will improve considerably, delinquencies will be reduced, the cost of doing business will be reduced, and new opportunities will be created for utilizing the Federal work force in the rural development area. DLOS is expected to achieve substantial savings in staff resources beginning in 1997. This will create opportunities to redirect some staffing from mostly clerical responsibilities to more challenging work, such as outreach and coordination of USDA's overall rural development mission.

Rural Business-Cooperative Service

Jobs are the cornerstone of all economic development—rural as well as urban. The Department's role in creating jobs and improve the infrastructure in rural areas is both financial and supportive.

The business and industry loan program has been expanded over several years from a relatively modest \$100 million level to about \$700 million in 1996. The 1997 budget would increase the guaranteed loan program to \$750 million. In addition, \$50 million is requested for direct loans to enable the agency to target areas in which the guaranteed program is not as effective as direct lending.

Efforts are underway to streamline the program and encourage private lender participation. Yet, despite improvements in the guaranteed side of the program, there will remain opportunities to assist those rural businesses that are underserved by private lenders. Whether due to geography, discrimination, or, possibly, an enterprise involving a new product or innovation that private lenders may think is too risky, there are gaps in the credit market. A moderately sized direct loan program could be helpful in closing these gaps.

The budget also provides for a substantial increase in the intermediary relending program, from \$37.6 million in 1996 to \$80 million in 1997. An important feature of this program is that it gives encouragement to the development of organizations with an interest in making loans to rural businesses. In other words, it supports structural change that will be of long-term benefit to rural America, which may even exceed the immediate benefit of the loans that are made in the short term.

I would also note that the budget includes a modest increase in the Alternative Agricultural Research and Commercialization program from \$5.5 million in 1996 to \$6 million in 1997. This program is particularly useful in meeting the needs for capital to commercialize value-added and other innovative products.

Finally, I would mention that about \$80 million of the rural development program funding would be targeted to Empowerment Zones and Enterprise Communities (EZ/EC). The EZ/EC initiative reaches communities with the most persistent poverty and other economic adversity, yet, which have developed a strategic plan for development.

NATURAL RESOURCES AND ENVIRONMENT

In the natural resources and environment area, the budget reflects and supports the continuing progress made in revamping how the Department delivers its conservation services to the field. The establishment of the Natural Resources Conservation Service (NRCS) through the consolidation of several of the Department's conservation programs was the first step in this process and has placed in a single agency a more complete set of conservation tools needed to help farmers produce in ways that minimize environmental problems. Maintaining a proven NRCS field staff while significantly reducing headquarters and State level staff will help create a leaner yet more responsive USDA. The emphasis will be on helping farmers in their quest for new and better ways to deal with natural resource issues which in the long run will benefit the Nation and the environment.

The Administration continues to place a high priority on the protection and restoration of wetlands and the 1997 budget supports these goals with a \$188 million request to enable NRCS to fund enrollment of an additional 226,000 acres of wetlands into the Wetlands Reserve Program. This would be in addition to the nearly 315,000 acres that we expect to have enrolled in the program by the end of fiscal year 1996. The overall enrollment goal for the program is to reach 975,000 acres by the end of calendar year 2000.

Even though the first milestones in implementing the 1995 Food Security Act's conservation compliance provisions were reached at the end of 1994, a major and critical workload remains. Maintaining and updating the more than 1.7 million conservation plans developed by NRCS on 145 million acres of land will continue to demand about 30 percent of the agency's technical assistance resources. Given the very favorable outlook for prices for major commodities and our announcement that there will be no land retirement requirements for commodity programs, we expect farmers will be farming more land, and farming it more intensively. We believe, with appropriate assistance, farmers can do this without returning to the 1970's mentality of planting from fence row to fence row. Under these circumstances, it is even more important that our technical assistance work force at the field level be maintained and given the tools needed to improve operating efficiency and customer service.

To attain these goals, we have placed a high priority in this budget on supporting the successful implementation of the Department's one-stop service center concept. Upgrading the technology that this initiative depends on is critical and the budget includes an increase of \$20 million to accelerate the acquisition of digital orthophotography maps and the rate of digitization of soil surveys. This increase will allow USDA to provide the Service Centers with the computerized databases they would need over a period of 6 years rather than the projected 20 years.

The Department, through NRCS programs, will also support the Administration's Everglades Restoration Initiative. The NRCS Conservation Operations budget also will devote some technical assistance resources to helping landowners who want to voluntarily protect and improve private grazing lands.

In the watershed restoration and flood management area, we are proposing a funding level of \$116 million, which is an increase of \$16 million over 1996. The initiative begun by NRCS to reduce the unfunded projects backlog will continue as will our efforts to make sure that those remaining projects funded in 1997 have strong local support and that both economics and ecology support Federal assistance to advance their implementation. This requested level for watershed funding also provides for the Emergency Watersheds Program which has been used quite extensively over the last few years to address many of the Nation's natural disasters. Many pending requests for assistance continue to go unfunded and the budget anticipates that this need will continue into 1997. We are also making a \$100 million 1996 supplemental request to repair watersheds impaired by the Blizzard of 1996, the Pacific Northwest floods of 1996, and the floods from rains and hurricanes of the 1995 storm season.

RESEARCH, EDUCATION, AND ECONOMICS

The budget recommendations for the programs administered by the Research, Education, and Economics (REE) agencies reflect the importance that science, technology, and economic information has for the future performance of the agricultural sector in the U.S. economy. With current emphasis on reducing public spending, it is important not to lose sight of the critical importance of maintaining the overall level of scientific and technological excellence that supports agriculture. Without gains in agricultural productivity, we cannot expect to continue to provide low cost food for American consumers, enhance farm income, continue to compete effectively for export markets, and moderate the impact of agriculture on the environment. The

importance of Federal support for technology goes beyond the direct investments made in programs and facilities. Federal programs encourage States to invest in research and technology at levels above what they would do otherwise, and publicly supported research provides the basis for and complements much of the work carried out in the private sector.

REE agencies play an important role in support of other agencies by conducting high priority research on matters related to the environment, conservation, human nutrition, plant and animal diseases, and food safety. Our research on new industrial uses for agricultural crops enhances farm income and market stability. Our data collection and analysis activities provide critical information about commodities and rural America to policymakers, program managers, and producers. REE also supports agriculture by collaborating with other Federal agencies on the programs they conduct that affect the food and agriculture sectors of the economy.

Total funding requested for REE agencies in 1997 is \$1.8 billion, which is about the same as the 1996 appropriation. Within this total, the Agricultural Research Service (ARS) will receive an increase of about \$66 million, 9 percent above the 1996 appropriation. The ARS proposal includes an increase of \$7.5 million above the 1996 appropriation for food safety research to support the Hazard Analysis and Critical Control Point (HACCP) model for pathogen control and development of a science-based risk assessment inspection system. Expanded research on food safety is essential in several areas including intervention strategies, processing methods, diagnostic tools, and risk assessment. Funding is proposed for preserving and expanding USDA's plant genetic resource collections. These collections underpin crop breeding efforts throughout the United States. Preservation and filling gaps in base collections is essential for continued crop improvements and is a unique Federal responsibility. Other increases for 1997 will enable us to promote effective biocontrol techniques for pests, develop alternatives for methyl bromide, establish effective livestock utilization management techniques, and develop integrated farming systems which will contribute to a more sustainable agricultural production system. ARS also plays an important role in the Administration's initiative to restore the South Florida Everglades ecosystem. The budget includes a \$2 million increase for research on sugarcane and biological control of aquatic weeds and \$4 million for construction of a quarantine facility for final testing of insects that will be imported from Australia to provide a means of natural control of *Melaleuca* trees in South Florida. Construction of this facility was designated by the Administration's South Florida Ecosystem Task Force as a top priority to ensure prompt restoration of the Everglades National Park. Many other restoration activities rely on the construction of the facility and the research it will house in order to be successful.

As indicated, we are also requesting a 1996 supplemental of \$2.5 million that would support the U.S.-Israel Binational Agricultural Research and Development (BARD) program. Through a competitive process, BARD supports research that is of significant value and performed by scientists both the United States and Israel. This additional funding is needed to honor a U.S. commitment to provide \$2.5 million, that will be matched by Israel, to the program.

The budget also includes funds for two major facilities where we need to relocate laboratories that are outdated, and in areas where our activities are constrained by proximity to urban populations. These new facilities in Parlier, California, and Ft. Pierce, Florida, will enable us to continue to conduct vital research on citrus and other horticultural crops. Agriculture in California and Florida is intensive, diverse, and high value. The research programs at these laboratories are among our highest priorities. If we neglect these programs, we risk enormous losses in domestic and export markets. The budget request for facilities also includes funds for modernization programs at Beltsville, several regional laboratories, Weslaco, Texas, and Plum Island, New York, and, as mentioned, to construct a weed control lab in Ft. Lauderdale, Florida.

The budget request for the Cooperative State Research, Education and Extension Service (CSREES) is a reduction of \$65 million, 7 percent below the 1996 appropriation. The budget continues to reflect the Administration's view that the Federal Government should not be financing research projects and facility construction activities on university campuses through the congressional earmarking process. Proposed reductions in these two program areas amount to approximately \$100 million, or 11 percent of the 1996 appropriation for CSREES. However, the budget provides a net increase of about 4 percent for more broadly based programs that support research and extension at land-grant universities and other cooperating institutions. The funding for formula programs is held constant at the 1996 appropriated level. An increase of \$33 million is proposed for the National Research Initiative, the competitive grants program, which is open to participation by Federal laboratories, public and private universities, and other institutions and individuals. It is especially

important that the Federal Government support this meritorious program of both fundamental and mission-linked research.

The budget includes increases for CSREES and other participating agencies to move forward on the Integrated Pest Management (IPM) initiative. This initiative has the ambitious goal of achieving the adoption of IPM practices on 75 percent of U. S. crop acreage by the year 2000. The strategy is based on grower and other stakeholder input in program planning as well as implementation. CSREES is responsible for organizing implementation teams that involve growers in identifying their most important problems and setting priorities for research and education programs that will meet their field implementation needs. This request will allow us to support the activities of regional IPM implementation teams of growers, researchers, and practitioners in up to 16 production regions. We are also focusing research and education efforts on programs to support registration of minor crop pesticides and on our pest management alternatives program that targets research on pest problems where current pesticides will be unavailable due to regulatory concerns or pest resistance to ensure growers they will have effective pest management tools. Finally, increases are proposed to expand the current pesticide use survey program. High quality information on the use of pesticides and pest management practices is essential for measuring progress toward increased adoption of alternative pest management practices and for assessing the economic and environmental benefits derived from reduced pesticide use.

The Department conducts several relatively small, but important higher education programs to encourage students to pursue careers in agricultural and food sciences. Efforts are made through these programs to reach out to population groups who are under-represented in many agriculture-related fields to enable all young Americans to have opportunities for successful careers in agriculture. The 1890 Capacity Building Grants program, which is funded at the 1996 level, is the cornerstone of the Department's successful partnership with 1890 land-grant universities. In the 6 years from 1990 through 1995, over \$53 million has been awarded for 261 research and training projects, each of which features an active, cooperative relationship with one or more USDA agencies. We have also encouraged agencies to build on partnership relationships with 1890 institutions to establish centers of excellence which are on-campus entities devoted to addressing specific USDA agency tasks. The budget also includes a proposal for a new program to reach Hispanic institutions, and funding for the program of grants to 1994 Native American institutions begun last year. Contrary to what is heard so often these days about surpluses of scientists, such is not the case for food and agricultural scientists and engineers. Therefore, we are pleased to continue support for the highly successful Graduate Fellowships Grants program.

As farmers are forced to rely more on the market instead of the Government to make decisions, it is critical for them to have access to objective and timely information about agricultural markets. Changes in the agricultural sector must also be monitored and policymakers provided with the information and analyses they need to evaluate policy changes. Proposed funding for the Economic Research Service and the National Agricultural Statistics Service (NASS) will be used to maintain and, in some areas, strengthen the collection, reporting, and analysis of agricultural and rural data. More specifically, funding is proposed for an expanded data collection effort that will provide geographically specific information on the economic and environmental performance of American farms. This information is needed in order to more accurately assess at the local and State level the competitiveness of U.S. agricultural production, the performance of farm businesses, and the profitability of environmentally-friendly production practices.

In addition, the proposed budget for NASS includes \$17.5 million to fund the Census of Agriculture which is proposed to be transferred from the Department of Commerce to USDA. The integration of the Census of Agriculture with USDA's current statistical collection program will streamline Federal data collection activities and enhance the quality of information available about rural America.

FOOD, NUTRITION AND CONSUMER SERVICES

Our budget continues to provide for a national nutritional safety net designed to protect children and low-income families against hunger and malnutrition, as well as providing nutrition information and dietary guidance to all Americans to improve their health, and, ultimately, America's productivity. Nutrition is the link between agriculture and health.

The budget proposes to fund the Food Stamp Program at \$30 billion, including a \$2.5 billion reserve in case the expected decline in food stamp participation in 1997 fails to materialize. Food stamps will help improve the nutritional status of

over 10 million low-income households with an estimated 26 million individuals, over half of whom are children. Under the President's recommended budget, the Food Stamp Program continues to index basic benefits to inflation; count all energy assistance as income; require that adults aged 18 to 50 with no dependents be ineligible for food stamps after 6 months of each year unless they work 20 hours a week or participate in workfare or training (although eligibility continues if a State fails to supply a training or workfare slot); and new integrity measures crack down on fraudulent food stamp trafficking and reduce program waste.

For the Child Nutrition Programs, including the National School Lunch, Breakfast, Child and Adult Care, Summer Food Service, and Special Milk Programs, the budget proposes \$8.7 billion. As part of welfare reform, we are also proposing savings through better targeting of subsidies in Family Day Care homes. Given the scope and importance of the National School Lunch Program, we are requesting a small increase to support our School Meals Initiative for Healthy Children, which is designed to help schools serve meals that meet the 1995 Dietary Guidelines for Americans and to teach the children about nutrition. This is a critical component of the Department's commitment to improve the health and education of children by promoting food choices for a healthy diet.

Also, as previously agreed to by both the Congress and the Administration, our budget meets the President's commitment to reaching full participation in the WIC program. Due to continued substantial infant formula rebate savings, carryover funds, and an increase of \$50 million in new budget authority over the 1996 level, WIC will be able to serve 7.5 million women, infants, and children, our best estimate of the number of eligible persons who will choose to participate by the end of the fiscal year. To protect WIC program participation against unexpected food cost increases, we are also proposing \$100 million in reserve budget authority to be tapped only in cases where actual food costs exceed budget estimates.

To streamline administration, and give States more flexibility, our budget proposes to continue the consolidation of The Emergency Food Assistance Program and the Soup Kitchens and Food Banks Program initiated in fiscal year 1996. In addition, we are seeking an increase in funding for these commodity purchases.

Finally, we are proposing \$4.7 million to continue support for the Center on Nutrition Policy and Promotion and enable the Center to help all Americans reduce their risk of nutrition-related disease. A key strategy to further this goal for fiscal year 1997 is to promote the understanding and use of the 1995 Dietary Guidelines for Americans. The Dietary Guidelines are jointly issued by this Department and the Department of Health and Human Services, based on the latest scientific information, and serve as the basis of all Federal nutrition policy. By following these Guidelines, most Americans could lead healthier, more productive lives, with a greatly reduced chance of diet related disease later in life.

As stewards of the Nation's \$43 billion food assistance programs, we will continue to work with States to simplify program administration and reduce State and local administrative burdens. Part of this will be continued work towards implementation of electronic benefit (EBT) systems nationwide for food stamps, and, where feasible, for WIC. We will also continue to work with States to improve Food Stamp payment accuracy, reduce fraud and trafficking in Food Stamps, and improve program integrity in the Special Nutrition and Child Nutrition Programs. To accomplish these tasks, our budget proposes a \$111 million to ensure continued improvements in Federal Food Program Administration, including \$3 million for improved ADP systems. As the Congress continues to grapple with much needed reforms to our welfare system, the Department will continue to work closely with it to protect essential nutrition benefits, craft reasonable work requirements, and effectively balance State and Federal responsibilities.

FOOD SAFETY

The Administration places the highest priority on implementing the Hazard Analysis and Critical Control Point (HACCP) inspection systems for meat and poultry. The Department expects to publish the final rule in the Federal Register in the near future. Numerous modifications of our February 5, 1995, proposal are being made to reflect our further thinking and the numerous public comments received during an extensive comment period that included meetings, hearings, and conferences. Implementing the HACCP rule will require us to provide our work force with the training and technology necessary to meet their evolving regulatory responsibilities and to address a greater range of food safety hazards throughout the farm-to-table continuum. We must meet the challenge of achieving program savings that can be invested in establishing this fundamentally new inspection system.

For 1997, we are proposing a modest program increase of \$10.5 million to continue making investments in technologically advanced systems and equipment. This investment is necessary to carry out HACCP. The successful implementation of HACCP is essential because the risk to public health of simply retaining the current organoleptic inspection system is not acceptable. Under the HACCP system, in-plant inspectors will be less involved in the daily management of plant activities. They will be more involved in activities to verify that establishments are successfully implementing their HACCP plans and achieving their pathogen reduction goals. FSIS will also work with State and local agencies to identify the sources of foodborne illness throughout the United States. Increased epidemiological reviews will improve FSIS' ability to allocate its resources to address emerging food safety problems. It will also provide FSIS managers with the information essential to improving program effectiveness as required by the Government Performance and Results Act.

Legislation will be proposed again to recover the cost of providing inspection services beyond the primary approved shift. This proposal will save \$109.4 million and will put all plants on an equitable financial basis. Currently, plants must pay for overtime inspection but are provided with free inspection services for additional full shifts. Often, small plants will use overtime instead of scheduling additional full shifts, a practice typically followed by large plants.

We are requesting a 1996 supplemental of \$9.5 million. This supplemental request will fund: (1) modest resources for activities aimed at reducing the incident of microbiological contamination at the production level; (2) the hiring of "other-than-permanent" inspectors to alleviate inspector shortages that have resulted in production stoppages and failure to cover processing plants on a daily basis, and; (3) critical investments in training inspectors in the program for the future, to pilot test new HACCP based inspection systems, and to engage with the States in small plant HACCP demonstration projects.

MARKETING AND REGULATORY PROGRAMS

The Marketing and Regulatory Programs facilitate domestic and international marketing of U.S. agricultural products by: (1) ensuring the health and care of animals, (2) controlling the spread of plant pests, and (3) improving market competitiveness in fruits, vegetables, crops, livestock and other agricultural commodities. Consumers as well as the agricultural sector benefit from these activities.

Fees for services rendered pay a large percentage of the costs of these programs. We are proposing legislation to recover an additional \$35 million of the cost for services that directly benefit the industry or user. New license fees are requested to recover the entire cost of administering the Packers and Stockyards Act (P&S Act). Expanded user fees are requested for developing grain standards, for certain animal and plant inspection activities, and for Federal administrative costs for operating marketing orders and agreements.

For the Animal and Plant Health Inspection Service, the budget contains an additional \$10 million to fund sterile fly releases to prevent reinfestations of Medfly in the United States. We also expect the Agricultural Quarantine Inspection (AQI) program to collect about \$125 million in fees, to keep up with the growing demand for AQI services.

The budget proposes \$1.3 million of increased funding to strengthen the Packers and Stockyards programs of the Grain Inspection, Packers and Stockyards Administration (GIPSA). These programs investigate complaints regarding unfair, unjustly discriminatory or deceptive practices in the livestock, meat packing, and poultry industries. The increased funding will enable GIPSA to: (1) install electronic filing equipment to reduce financial reporting costs for stockyard owners and packing house operators, (2) hire staff that can analyze complex data and to support agency program activities, and (3) administer the dealer trust provisions, legislative if authority is provided. The data provided by electronic filing would improve understanding of captive supplies, formula pricing and other procurement practices.

The budget also includes \$1.2 million of increased funding for the Agricultural Marketing Service to monitor farmers' compliance with pesticide recordkeeping requirements. This program is an important component of the Department's overall efforts to reduce the level of pesticides used on farms.

DEPARTMENTAL MANAGEMENT ACTIVITIES

The 1997 request includes funds to continue the Department's Service Center implementation effort and the strategic space plan at the Washington headquarters to provide safe, efficient office space for USDA employees.

The administrators of the USDA Service Center agencies—Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS) and the Rural Economic and

Community Development (RECD) mission area—are responsible for the implementation of USDA Service Centers to assure successful reorganization of the field office structure while improving services and program delivery. Our goal is that USDA Service Centers, in partnership with people and communities, will deliver agricultural, rural development, and natural resource programs with a continuity and quality of service that exceeds customers expectations and achieves maximum efficiency at one location. Activities that were formerly under the responsibility of the Department's InfoShare Program have now been incorporated under the broader agency effort to consolidate the field office structure.

This effort includes the physical consolidation of offices and improved service to our customers through business process reengineering initiatives and investment in information resources management and communications. For our customers, the Service Center will offer a central location to obtain information and participate in the programs. For USDA, this structure will ultimately offer consistent and streamlined business processes, an integrated phone system and compatible computer systems to facilitate data gathering and working with the producers.

Because we strongly believe that the location of local Service Centers should be determined by officials with direct knowledge of the local situations, we vested the authority for making those determinations with the State Food and Agriculture Councils (FAC). The State FAC's are comprised of the top USDA officials in the States from FSA, NRCS and RECD. The State FAC's developed State plans to implement USDA agency collocation, common service areas, and shared resources and information. Based on these plans, USDA will be operating with fewer offices once the reorganization is completed. However, we will be able to offer producers one-stop service at one of more than 2,500 Service Centers.

The 1997 appropriation request proposes the continuation of the \$7.5 million central fund in the Office of the Secretary to support the Service Center implementation. However, since the program is an agency partnership, additional funds will be provided by the participating agencies. We are providing the Committee with more detailed crosscut information on the implementation.

The Department also has developed a strategic space plan for buildings and facilities in the Washington Metropolitan area which has been tailored to meet the needs of USDA based on the projected reductions in staff at the Washington headquarters through December 1999. The 1997 request proposes continuation of this project.

An increase is proposed for the Office of the Chief Economist to fully fund the activities of the Office of Risk Assessment and Cost-Benefit Analysis (ORACBA). The recently established ORACBA is responsible for coordinating and reviewing all risk assessments and cost-benefit analyses for major regulations which regulate issues of human health, human safety, or the environment. Additional funding is requested to provide ORACBA with the technical and scientific support needed to ensure the best available science is used in the Department's risk assessments and cost-benefit analyses.

The National Appeals Division (NAD) was also recently established and faces many challenges in consolidating the former agency appeals staffs into one organization. NAD provides an independent appeals process, ensuring fair and equitable treatment for USDA program participants. Funding is requested for an office consolidation initiative to enable NAD to fulfill its statutory requirements.

The Office of the General Counsel (OGC) provides critical legal support and advice to the Department and its agencies. Recent budget austerity has resulted in a significant decline in OGC resources. An increase in funding is requested to enable OGC to hire additional paralegals and support staff allowing attorney time to be utilized more efficiently in the resolution of legal problems.

This budget request will maintain the current level of services for many of the Department's central offices such as the Departmental Administration staff offices, the Chief Financial Officer, Office of Communications, and the Office of the Inspector General. Since these offices provide essential services in support of USDA agencies, it is important that adequate resources be provided to maintain this level of service.

That concludes my statement. I am looking forward to working with the Committee in the months ahead in reviewing these budget proposals as we work to meet our common objectives of serving our customers and controlling Federal spending.

SOUTH AFRICA'S MINISTER OF AGRICULTURE

Senator COCHRAN. Mr. Secretary, thank you for introducing your special guest, the Minister of Agriculture from South Africa. We ex-

tend a special welcome to you, Mr. Minister, and we are glad you are here.

I understand that you have had an opportunity, Mr. Secretary, to have discussions with the Minister from South Africa, and I was told that one of the programs that you discussed was the Cochran Fellowship Program and the Emerging Democracies Program where we provide opportunities for exchange of ideas and information to make our trade linkages stronger, to provide information that will help enhance the economies of all nations who participate in the program. I wonder if you could comment on that.

Secretary GLICKMAN. I would say that that subject did come up. It actually comes up about everywhere I go, Senator Cochran, in dealing with emerging democracies. In countries around the world, whether in Central and Eastern Europe, whether in Asia, whether in South Africa, as we are facing today. It is an extremely popular program and one we think will educate people around the world as to constructive ways to use some of the techniques maybe we have here to improve their economic system. This is one of the best things we can do to increase productivity in agriculture as well.

FARM BILL

Senator COCHRAN. I thank you for that.

In connection with the farm bill, you mentioned the fact that we are approaching a point where we are resolving all of the issues so that we can approve that bill. I anticipate from your comments that the President will sign the farm bill that has been negotiated by the conferees. Is that correct?

Secretary GLICKMAN. He has said that he would. However, he has some concerns about part of it, but overall, he believes that time is not the friend of extending the debate much longer.

FUNDS REQUESTED FOR UNFUNDED FARM BILL ITEMS

Senator COCHRAN. Well, I understand too that there are some changes in programs in the farm bill that may cause you to reexamine the budget request. Would it be anticipated that you will look at certain programs that are authorized maybe in this farm bill where you have not requested funding and come in and ask for funds that would be allocated to some of these new programs?

Also, a wildlife habitat incentive program is authorized in this legislation which will permit conservation reserve program dollars to be allocated on a cost-share basis to encourage landowners to develop wildlife habitat on their farmland and to enhance existing habitat. I know that is a new program, but I hope that it can be supported by the administration.

Secretary GLICKMAN. At this stage I am not in a position to tell you about any specific decisions we have made. We are going to have to look at our budget in light of this farm bill. We support the particular provision that you talked about. We are going to do our best to try to do some reallocation and will discuss with you those ideas as time goes on. It is clear that this farm bill is going to change our proposed budget, I do not know how materially at this time; however, we are going to take another look at our spending items.

USDA REORGANIZATION

Senator COCHRAN. I am pleased you mentioned the reorganization. I am convinced that much of what is being done in the reorganization is going to make the Department more efficient and better able to deliver services, more farmer friendly, more supportive of those who need benefits from the programs administered by the Department—nutrition programs and the like.

Do you anticipate making any requests for special funding requirements in connection with the reorganization of the Department?

Secretary GLICKMAN. I would ask the Deputy if he would talk to you about that because he has been more involved in the specifics of the reorganization.

Mr. ROMINGER. One of the issues in the reorganization is making sure that we have the telecommunications resources in these restructured county offices to support the one-stop shopping that we are talking about. We have in past years asked for money for a program that used to be called InfoShare. We have reorganized InfoShare and are administering that money from the Secretary's office to manage that telecommunications and computer purchases. However, those areas in the next couple of years will require additional funds when we get to the point of buying the new computer system to support those offices.

Now, in light of the new farm bill, we will have to take another look at that to see exactly what the requirements will be. We anticipate there are going to be some changes in what the Farm Service Agency is going to be required to do, but that is a budget item that we will have to take another look at.

Senator COCHRAN. When this reorganization started, people down in my part of the country got worried that a lot of the local offices were going to be closed and consolidated and it was going to make it tougher to make contact with those administering farm programs and other Department programs. What has been the reaction that you have heard from around the country? Have people pretty well accepted the changes that have been made?

Are any further office closings or consolidations to be expected in connection with the reorganization?

Mr. ROMINGER. This is a multiyear program, and yes, there will be some more county office closings. Those closings are all known now because we outlined the total program. We have closed about 500 of the 1,200 that we said we would either move or close in 3 years. We have got this year and next year to complete all of the transition. So, there will be some more closures in the next couple of years.

We are on track concerning the three agencies that are in the area involving one-stop shopping, our Farm Service Agency, the Natural Resources Conservation Service, and the Rural Economic and Community Development mission area, but other agencies in the Department have also been looking at their organization. We have closed 112 additional offices in those agencies from the Animal and Plant Health Inspection Service, the Agricultural Marketing Service, the Agricultural Research Service, right down the list.

All of those agencies are also participating in the reorganization. So, we are on track.

RUSSIAN POULTRY EMBARGO

Senator COCHRAN. I have one other question. Then, I am going to yield to my good friend, the ranking Democratic member of the committee, Senator Bumpers, and in due course, to others in the order in which they arrived at the hearing.

Let me ask you about the decision by Russia to try to shut down our poultry exports into that country. That is very troublesome in my State and I know in Senator Bumpers' and a lot of other Senators' States. The worry is that this is going to be potentially disruptive to our poultry industry.

What is the outlook? What are you doing? Is there anything that you can say that would encourage us in the notion that Russia is going to maybe change its mind after its elections are held or make some reexamination of its priorities and open up to buying United States poultry products again?

Secretary GLICKMAN. Well, Senator, there was an agreement reached—I guess it was yesterday evening—that Vice President Gore, the Special Trade Representative, and our office were involved in these negotiations. They were with the chief Russian veterinarian who was here about phytosanitary issues like disease, Salmonella, and related items. We did successfully conclude this discussion on the sanitary requirements side of the picture, which will permit the immediate resumption of exports of United States poultry to Russia.

I say that because there have been highs and lows over the last few weeks concerning this, but I think that this issue has been resolved certainly for the time being so that the export certificates can continue to flow.

The Russians, however, are still making noises that they may increase tariffs on American poultry into Russia. It is something we are very worried about and believe that it will certainly have an impact on bilateral relations unrelated to agriculture as well. However, I can say that the sanitary issue has been resolved.

I must give special credit to the Vice President. He has a personal relationship with the Premier of Russia, Chernomyrdin, and he exercised the prerogatives of that relationship to move this matter toward resolution.

Senator COCHRAN. Senator Bumpers.

Secretary GLICKMAN. There will be a Russian team on the tariff issue coming in soon. It is either the end of this week or the next week.

So, it is a continuing worry to us. The largest export we have to Russia are chickens. It dwarfs almost everything else. It has become a very significant issue.

Senator COCHRAN. It makes everything else look like a bantam rooster, as they would call it. [Laughter.]

Senator BUMPERS. Mr. Chairman, thank you very much. I can tell by listening to you that you want to get this hearing over with as soon as possible. [Laughter.]

Senator COCHRAN. I am just not going to say much more.

Senator BUMPERS. I am just getting over it, so do not give it to me again.

Mr. Secretary, let me say, first of all, I am generally very pleased with your proposals and with your statement. It is very comprehensive. I just have a few questions that are topical.

Let me also say I appreciate more than anything else the restoration of the 20 percent in 1996—the restoration of those funds in the water and sewer program. I can tell you in my State that is certainly by far the most important rural development program we have. So, I thank you very much for that. That got down to almost nothing during the Reagan years and it is back up where it ought to be now and it is performing an outstanding humane benefit to the people of my State, as well as other rural States.

FARM BILL COSTS

Let me ask you about the farm bill, which I opposed and still do, but that is history now. Just for edification, what do you calculate the difference in the cost over the next 7 years to having continued with the existing program and the new so-called farm bill?

Secretary GLICKMAN. It will be several billions of dollars, but I would ask Keith Collins, our Chief Economist to respond to this one.

Senator BUMPERS. In other words, the new bill will cost several billion dollars more.

Secretary GLICKMAN. The difference, of course, is that the new bill is a flat payment bill. Whatever is in the baseline will be paid out unrelated to market prices under existing legislation. Whether prices are weak or strong, dollars are paid out. Under previous legislation prices were strong, dollars were not paid out. So, over a 7-year period, there is a great difference. Keith?

Mr. COLLINS. Over a 7-year period, if we continued with current law, we would have estimated that deficiency payments, which are parallel to the transition payments in the new bill, would have been a little over \$11 billion; whereas, under the new bill they are going to be \$36 billion.

Senator BUMPERS. \$36 billion?

Mr. COLLINS. \$36 billion, and they are locked in over the 7-year period.

Senator BUMPERS. So, you are saying that the new farm bill is going to cost \$25 billion more over the next 7 years?

Mr. COLLINS. That will be the difference in payments, based on USDA estimates.

Senator BUMPERS. I understand.

Mr. COLLINS. There are other aspects.

Senator BUMPERS. There may be some other things.

Mr. COLLINS. If you looked at total outlays of the Commodity Credit Corporation, the difference, using our estimates, over 7 years would be roughly \$20 billion. The new bill would cost \$20 billion more. Of course, that is very contingent on projections about future prices.

Senator BUMPERS. Thank you, Mr. Collins.

RESEARCH ON MAD COW DISEASE

Mr. Secretary, are we doing any research on the so-called mad cow disease in this country?

Secretary GLICKMAN. The answer is yes. We are fortunate that we do not have it here; however, we are still increasing our inspection. I am worried about it because I see how something like that can quell people's interests in eating meat and poultry.

Senator BUMPERS. Let me ask you this. My staff advised me that we have not imported any British beef since 1989. Is that a fair statement? Is that correct?

Secretary GLICKMAN. That is correct, yes.

Senator BUMPERS. So, we can sort of at least almost totally ease the minds of the people in this country about it.

Secretary GLICKMAN. That is correct.

I have been reading some of the science on this lately as to what is the cause of these diseases. It is rather exotic research. I do want to make sure that our people are not only inspecting properly—and we are augmenting our inspection as appropriate, our Animal, Plant, and Health Inspection people, both internally and in terms of at the border—but that we are also making sure that we do appropriate research into what causes neurological diseases in animals. It now appears—at least some say—that this problem is caused by eating feed that has been mixed to include, let us say—the unused parts of animals, brains, neurological parts of the system and that creates an environment where this can grow over a period of many, many years.

We had better know everything there is to know about it because, while this disease is very rare—even in England it is very rare—it is perhaps the worst disease known to man in terms of its effect and its quickness of death.

Senator BUMPERS. Always fatal.

Secretary GLICKMAN. Yes; it is always fatal.

But I would repeat what you said. We are confident that we are safe and we have not imported British beef.

By the way, on an unrelated matter, we had this thing with Karnal bunt, which is not serious to human health. But I took the step, basically granted by the Congress, of asserting an extraordinary emergency to allow the quarantining of grain moving within and without the State of Arizona. We need to take whatever steps are necessary when these things happen to ensure the rest of the population that these diseases will not affect them.

KARNAL BUNT

Senator BUMPERS. You anticipated my next question on Karnal bunt.

Have the British asked for any assistance from us in beginning research on the so-called mad cow disease?

Secretary GLICKMAN. I do not know about that. We are sending a scientist from the Agricultural Research Service over there to meet with them, and we want to make our people available at their request, anybody that they need.

HAZARD ANALYSIS CRITICAL CONTROL POINT SYSTEM

Senator BUMPERS. Are we still anticipating, in FSIS in the inspection of meat and poultry, with the new inspection system continuing along with the old system that we have a double inspection system for some period of time?

Secretary GLICKMAN. The answer is no, but there will be a transition period as we move from one inspection system to the other.

Senator BUMPERS. In each plant?

Secretary GLICKMAN. No; not in each plant. Some plants already meet the new HACCP requirements. Part of the rulemaking will allow the plants to have a great deal of flexibility in meeting the performance standards. Consequently, they will not have to operate two systems simultaneously. These rules should be announced—I cannot give you an absolute date—sometime in the next few weeks.

The goal is to require the plants to meet performance standards and not just merely to do job A, job B, job C, and job D because it has been done before. However, I can tell you that there probably will be a transition period in instituting the HACCP system. We are just going to have to do our best to make sure that the regulations are administered with good judgment.

Senator BUMPERS. Even with a double inspection, we still do not have 100 percent elimination of Salmonella, do we?

Secretary GLICKMAN. No, sir; not in poultry.

I am not sure there is 100 percent elimination of Salmonella anywhere in the world. I have been told that maybe Sweden does, but I do not know if that has ever been verified.

Senator BUMPERS. In order of magnitude, how much better is the new system than the old system?

Secretary GLICKMAN. We believe it is going to be much better because it is going to be a science-based/performance-based system rather than just a physical system which is historically what we have gotten. Again, a lot of the more modern plants are already using this in various forms.

What we will do at various stages of the production scheme is to perform tests for E. coli or Salmonella and at what levels. The fact is that very, very low levels, generally speaking, will indicate that there is not a problem; at higher levels, there is a problem.

RUSSIA TO IMPOSE TARIFF ON UNITED STATES POULTRY

Senator BUMPERS. One final question, Mr. Secretary, on the Russians' complaint about the quality of our poultry. Of course, you know that was devastating to some of the processors in my State. One in particular was really heavily hit.

Most people in this country do not realize that we export about 2.1 billion dollars' worth of goods to Russia a year and poultry is one-third of that, \$700 million. As you know, a lot of that comes out of my State; a lot of it comes out of Senator Cochran's State and quite a bit out of Kentucky now. They are getting bigger and bigger in the poultry business.

I do not want to beat a dead horse. Now, No. 1, I understand that there is one issue that still has not been resolved and that is the potential for the Russians putting a tariff on chickens.

Secretary GLICKMAN. That is correct.

Senator BUMPERS. If I were to assume that the Russians did this because they are trying to build their own poultry industry and probably could not because we can produce it so much cheaper than they can, if that is the genesis of this whole thing and they are going to put a tariff on, it seems to me it would be logical to assume that whatever the difference in the cost to them for producing poultry, compared to what they can buy it from us for—for example, if they can buy it from us for 20 percent cheaper than they can produce it—and I am talking about delivered—would it be reasonable to assume that their tariff will be about 20 percent or more?

Secretary GLICKMAN. I have heard estimates of more.

Senator BUMPERS. And, No. 2, if they do put a tariff on, would we retaliate?

Secretary GLICKMAN. We would have to look at whatever tariff requirements they impose. However, there is a level at which the tariff would be viewed as not being responsible and we would take appropriate action. I assume Mr. Kantor and others would recommend to the President that we take appropriate action.

Senator BUMPERS. Would that be a legalistic response or a subjective response? Would we decide that 20 percent was too much and 10 percent would not be too much, or is there some formula under the 301—

Secretary GLICKMAN. I do not think there is a specific formula. Periodically countries do raise their tariffs against each other, but jumping, let us say, 30 or 40 percent, or whatever it is, just overnight I think would be viewed as restrictive and subject to appropriate action.

Senator BUMPERS. Thank you, Mr. Secretary. Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator Bumpers. Senator McConnell.

Senator MCCONNELL. Mr. Secretary, Senator Bumpers said he did not want to beat a dead horse. [Laughter.]

Actually that is exactly the subject I want to go back to. [Laughter.]

EQUINE PIROPLASMOSIS

Equine piroplasmosis, which I confined my opening remarks to. As I indicated to you, Mr. Secretary, I wanted to come back to this subject because it is of enormous importance to my State which is the No. 1 horse exporter in the world, and also, some would argue, we have probably the most famous racetracks in the world as well.

As you know, Mr. Secretary, the issue here is the temporary placement of horses from Europe into Georgia to compete in the 1996 Olympics. The disease EP is passed in the tick population. A horse does not get it from another horse. A horse gets it from a tick. Once the tick population of a country is infected, it is there forever and the Europeans have an endemic EP problem.

Now, I argued to you and to your Department that no waivers should be permitted and that, in effect, these events ought to be held overseas. However, USDA and the Georgia Department of Agriculture decided to grant a waive and lift the barriers to the importation of these horses.

I would like to make it known that U.S. horses that compete in events overseas, must test negative for EP or they will not be allowed back into the United States. So, U.S. horses are stuck overseas if they are EP positive—that is how serious we have taken this disease.

It is a malaria-like disease that can lead to death.

Now, you have made a decision to permit these horses to come to the United States temporarily. You have worked out, along with the Georgia Department of Agriculture, a 20-point plan, which I do not expect you personally to be an expert on, but the 20-point plan is to try to control the potential spread of EP.

I am concerned about these safeguards being adequately enforced. It is one thing to say these are the safeguards, we are going to bring the horses in and we will stick to the safeguards. But I am concerned about whether in fact these safeguards will be adhered to, and I am also curious if you know how these safeguards are going to be carried out and enforced during the temporary position of these horses in the United States.

Secretary GLICKMAN. Senator McConnell, this is an issue that I am also very concerned about. Given the fact the disease spreads by ticks means that it is airborne basically. This is a subject that I have gotten headaches over trying to figure out the right way to do it.

By the way, Dr. Lonnie King, who is our Administrator of APHIS, the agency that monitors this, will be here on Thursday. He is a distinguished scientist and veterinarian. I would say that he would be an appropriate person to talk to about some of the specifics concerning EP safeguards.

Let me just mention a couple things. The Department is committed to ensuring horses that come into this country for the Olympic Games do not introduce this disease, and for that matter any other disease, into this country affecting horses. I also am aware of the significance of the horse industry in your State and throughout the United States.

What we did is to work closely with Tommy Irvin, who is the Georgia Secretary of Agriculture, and the Olympic Committee; but, particularly with the Georgia Department of Agriculture because they were key players in working with us to make sure that we had strict quarantine requirements.

I asked the question, What has happened in previous Olympic Games? Apparently it has been done both ways. For example, in the 1984 Olympic Games, and there were a number of equestrian events. I do not have a list of all of them, but I have asked that that be prepared for me. We have done it the way we are talking about doing it here.

Senator MCCONNELL. But it has been done both ways. In 1976, it did not have a waiver.

Secretary GLICKMAN. Yes; that is correct. In 1984, however, it did have a waiver, as well as, some other international equestrian events.

But anyway, here is what we have done. We have said that the EP-positive horses are being allowed entry only for the show jumping and dressage competition, not for the other competitions and not for the 3-day field event competition.

We have provided, as you know, the list of 20 conditions that have to be met. Our people will be on the ground and on the field every day. We will be watching the transport of these horses from the import station to the Georgia International Horse Pavilion where the quarantine will take place. They will be kept under guard 24 hours a day and will be checked at 8-hour intervals for ticks. They will receive the appropriate treatment. I do not know exactly what it is, but there is a pesticide treatment that is done on a frequent basis. Dr. King says that this is proven effective.

The scientists within APHIS say this is the protocol that has been used in most cases before. I fully understand your concern. Our scientists believe—and I have to rely on them in terms of their science basis—that this will protect our horses from EP.

But I am saying to you that you ought to raise it again with Dr. King as well, and I will continue to monitor it.

BUDGET FOR OLYMPIC GAME EP WAIVER

Senator McCONNELL. Let me pursue it just a little further, if I may. The 20 conditions for the waiver are to be financed, as I understand it, by the Atlanta Committee on the Olympic Games and they are going to pick up the cost of enforcing the 20 conditions. Does anybody in your shop know what the budget for that is?

Secretary GLICKMAN. Steve, do you know what the cost of this protection is, \$400,000? We have waived some fees that we would ordinarily collect from the Olympic Committee.

Mr. DEWHURST. Normally we would charge a fee for the import and quarantine of these animals, and that fee would add up to about \$400,000. With the permission of this committee and the Congress last year, we agreed to waive those fees, so that money is being taken out of the APHIS-appropriated budget. But I do not know how other costs beyond the \$400,000 may be paid.

Senator McCONNELL. But it is correct that the Atlanta Committee on Olympic Games is supposed to pick up the cost for this. Is that your understanding?

Mr. DEWHURST. That is my understanding, anything at least beyond the \$400,000.

Senator McCONNELL. Let me just go one step further.

Secretary GLICKMAN. We will pay for our own people.

Senator McCONNELL. Yes.

Let me tell you why I am skeptical. There is supposed to be some special construction done to make it possible for these 20 conditions to be met. I am told that nothing has been done to construct and complete the quarantine area of the horse park for the EP-positive horses, and we are about 3½ months away from the Olympics. No construction has been started, and apparently some construction is required in order to implement these 20 conditions which were part of the agreement for the waiver.

I just want to make the point, Mr. Secretary, in the strongest possible way that the simple fact that they agreed to do this does not guarantee that it gets done, and does not guarantee that it gets done correctly. I would just hope to earmark this for your personal attention because if the tick population of the United States is affected, it is the beginning of the end of the quality horses that are

now a major export for this country. This is a hugely significant issue for my State.

We accept the fact that the waiver has been granted, but if I could have your personal assurance that this thing is going to be watched very, very carefully so that the conditions are actually met because I have some real concern as to whether or not that is happening already. If I could have your personal assurance on that, I would feel a good deal better.

Secretary GLICKMAN. You have it. I will make sure that, when Dr. King comes here to testify, he will give you a status report on those 20 conditions. I accept your admonition and I want you to know that I will do everything I can to make sure the conditions are met.

EDMUNSON COUNTY FSA OFFICE

Senator MCCONNELL. Finally, just one very parochial issue I want to address to Secretary Rominger. The Edmunson County FSA office, which is one of the many I am sure that are being discussed with you, was the subject of a meeting earlier this year with one of our Congressmen, and as a result of the meeting, the closure date of September 1997 was established.

It is our understanding that the State people are not honoring that agreement that you entered into. I wish you would take a look at that. We believe they are proceeding to close the office before the date that has already been agreed to, and I just wanted to earmark that for your attention as well.

Mr. ROMINGER. Thank you. I certainly will check that again. I did check on that and talked to the State director about a month ago I guess.

Senator MCCONNELL. Oh, you did. Maybe you can tell me something then.

Mr. ROMINGER. Pardon?

Senator MCCONNELL. Maybe you can tell me something I do not know then.

Mr. ROMINGER. I did talk to the State director and told him that we had agreed that that office would stay open until September 1997 and I instructed him to do that. He said that is the plan, and we will hold to that plan. But I will reconfirm it again.

Senator MCCONNELL. Well, I hope that is the case because the people down there think it is going to be closed in the next couple of months. Maybe they are just panicking unnecessarily. Thank you for checking on that.

Thank you, Mr. Chairman.

Senator COCHRAN. Senator Kohl.

FARM BILL MILK MARKETING ORDER REFORM

Senator KOHL. Thank you very much, Senator Cochran.

Secretary Glickman, it is good to have you with us today. I have three issues that I would like to discuss with you. The first is the milk marketing order reform question.

Last week, Mr. Secretary, in response to a phone conversation that you and I had regarding the issue of milk marketing order reform in the farm bill, you sent me a letter in which you stated—and I quote:

We recognize that the current Federal milk marketing order system has produced regional inequities in the pricing of milk. No doubt producers in the upper Midwest have felt much of the brunt of these problems. Many of these inequities can be dealt with by making the Federal milk marketing order system more flexible and more reflective of today's market for milk and dairy products by reducing class I differentials where necessary. Let me assure you the administration is committed to reforming Federal milk marketing orders, making them more sensible, fair, and economically justifiable, and addressing the concerns of the upper Midwest producers.

Mr. Secretary, I very much appreciate your willingness to make this statement, and so I ask you, do you believe that the directions included in the dairy provisions in the farm bill provide you now with adequate direction in order to make the pricing reforms that you suggested in your letter to me? In other words, will you now be able to reform class I differentials to reflect today's market?

Secretary GLICKMAN. The answer to the first question is generally yes. I believe the provisions in the dairy title, by reducing the number of milk marketing orders and by putting timelines on how long it takes us to make decisions, provides us the flexibilities we need to make the system more fair. I have felt, as I have said in Wisconsin and here, that the pricing differentials on class I milk are unfair and treat your part of the country in a disproportionate, negative way. The facts speak for themselves. In implementing this bill, it is my goal to try to reduce and eliminate that differential.

If anything I have ever seen is the most extraordinary case of complex bureaucracy at work, it is the administration of milk marketing orders. The conferees, to their credit, took a step to try to reduce that complexity, reduce the number, and to get us to make decisions quickly. I believe we can. California right now makes decisions on marketing orders quickly. Granted, it is not as complex as we have here, but we can do the same thing.

It is our goal to do that, Senator, and reduce and, to the extent possible, eliminate the differential that your people are responsible for. It is going to take a little cultural exercise within the shop at USDA to get people to think toward reform in milk marketing, but we are going to do it. I believe Congress is clear on this. That part of the provision was constructive.

Senator KOHL. All right. That is very encouraging.

Secretary GLICKMAN. I have my good friend here, Keith Collins, who knows more about milk marketing probably, except for you, than the entire room put together, and he is also committed to this as well. He has given me many lectures on the dairy program in this country. I have learned a lot of what we should not do, and now we have an obligation to try to fix this system.

MILK MARKETING ORDERS

Senator KOHL. Do you want to say something about that, Mr. Collins?

Mr. COLLINS. I agree with the Secretary. I believe he has broad flexibility in this bill. This bill instructs him to reform and consolidate orders. It specifically focuses on the class I differentials by telling the Secretary to take into account utilization rates and multiple basing points. Those are clearly directed at class I differentials. So, I believe the will of the Congress is there for him to take a look at the whole price structure under Federal orders. He has got the tools to make changes if he so decides that is appropriate.

Senator KOHL. I am encouraged with what I have heard you say today. And I am not paraphrasing. I am almost directly quoting back to you. You said that what you look forward to doing is to reducing and to eliminating those differentials.

Secretary GLICKMAN. Correct.

Senator KOHL. Thank you very much.

Secretary GLICKMAN. You're welcome.

Senator KOHL. I would like to stop that right there. [Laughter.]

Mr. COLLINS. If I could just elucidate on the Secretary's comment.

Senator KOHL. Go ahead.

Mr. COLLINS. Elimination is an issue that remains to be determined. Certainly when you consolidate from the current 33 orders to 14 or fewer orders, there will be a difference in class I differentials. They will not reflect what we have now. They will not reflect what was in the 1985 act, but whether they will be eliminated or not will depend on the supply-and-demand analysis that has to be done.

Senator KOHL. That is fine, but you understand from the point of view of those of us in the upper Midwest, that even if you just have two different areas and the differential is as great as it is now, we have not been helped. It is the differential that we in Wisconsin and the upper Midwest are very concerned about. If you reduce the number of orders from 34 to 10 or 12, that in and of itself has not accomplished anything unless it then results in something on these differentials. The Secretary said reduce and eliminate.

Secretary GLICKMAN. It would reduce the differentials. The way I would look at consolidating orders, you would see differentials reduced as a part of that consolidation.

My goal is to try to eliminate the differential. This would require a major overhaul of the system to change the milk marketing system in this country. But I have said many times before—and I still believe it—that the differential is not fair. I would like to do my best to see it resolved.

Senator KOHL. Is there any reason today why there should be a differential between Wisconsin and Tennessee or Missouri or North Carolina? Is there any reason other than the fact that that is just the way it is?

Mr. COLLINS. There are people who would write volumes on reasons for having differentials, people who believe in classified pricing of fluid milk and the need for ensuring that there is a balance between manufacturing plants and fluid uses; and, that the costs of balance is appropriately paid for. There are some people who would make that argument. That is an argument that we will have to weigh when we go through the process of reform.

Secretary GLICKMAN. We have a little bit of this in the loan rate issue, which Senator Daschle attempted to partially correct in the conference report, having to do with differentials in loan rates based upon distances from export points. We have had that forever as well. The further you are away from, let us say, Kansas City, the lower the loan rate you will get for your price of grain. It has been that way for 50 years probably, and he attempted to try to, at least, limit those differentials. So, you have differentials like

this. One factor, of course, is transportation. But to the extent possible, we need to try to reduce and eliminate them.

Senator KOHL. I appreciate this. Can we hope that this process will begin to unfold sometime in the near future?

Secretary GLICKMAN. Well, the goal is for us, as soon as we get this bill done, to begin to work. We have been instructed by Congress. What do we have, 3 years?

Mr. COLLINS. You have 2 years to propose the rule and an additional year to make it final. I think it is our goal at the Department to try to do that as soon as possible before the 3 years are expired.

NORTHEAST DAIRY COMPACT

Senator KOHL. Good, all right. I thank you.

Second, Northeast Dairy Compact. I and others were stunned, Mr. Secretary, to learn that the final farm bill overturns the will of both the Senate and the House and includes language that gives you the authority to grant consent to the Northeast Interstate Dairy Compact.

There was an editorial recently in the New York Times that referred to it, and it said—I quote:

A House-Senate conference committee has managed to tarnish the most important farm bill in years by inserting a last-minute provision for a New England milk cartel that would gouge consumers and violate the free market concept that has made the 1996 farm bill worthwhile. The full House and Senate need to excise this noxious favor to the New England dairy lobby before approving the bill. The regional milk monopoly is the very opposite of the kind of reform that this bill was meant to provide.

The final bill language states that you can approve the Northeast Dairy Compact only if you determine that there is “a compelling public interest in the area.” Obviously, I believe that there is not a compelling public interest in creating the compact, and I am hopeful that you will agree with me after fully reviewing the matter.

So, I ask for your strong assurances, Mr. Secretary, that before making any determination regarding the compact, that you will be conducting a very formal and thorough review of all the implications of this regional dairy cartel and that you will certainly be giving those of us who oppose the compact a full opportunity to make our case.

Secretary GLICKMAN. Senator, I am aware of your opposition to this. I would say the statute as written, assuming it is adopted, says that I have to examine this in light of whether there is a “compelling public interest in the region.” I think those are the words of the statute. I will have to examine that in that context. That means in the area that the compact is to be effected.

Obviously, we are going to have to do a study of the issues, including a study of alternative market mechanisms. I do not want to prejudice that study. But in order to make the finding, obviously, I have to have something to legitimize the finding, which means I will have to do a review of it. It will be in Keith Collins’ shop. At least in some respects, my expert on dairy will be responsible for taking a look at it, but I do not want to prejudice it.

The statute is pretty clear. It says, "compelling public interest in the region." So, that is what we will have to consider when I make a judgment on this.

Of course, as I understand it, that compact is to cease once the marketing order decisions are finished on the part of the Department. It certainly is another rationale, especially from your perspective, to see that we complete that process as quickly as possible.

Senator KOHL. Are you impressed by the fact that we considered the public interest in a debate and in a vote on the floor of the Senate and it was defeated on the basis of not being sufficiently compelling in the public interest? And then Senators from that area, who have quite a bit of clout, were able to do whatever they do in the conference and all of a sudden, lo and behold, what the House and the Senate refused to do is now in the conference report. Will that have an impact on your determination of what compelling public interest means versus what politics also may mean?

Secretary GLICKMAN. I am not exactly sure yet what the term "compelling public interest" means. We are going to have to examine very carefully the committee report language, language in the statute, and other kinds of references. You know of course, it is discretionary. It has got a 3-year total life. But I would have to say that, again, the statute says "compelling public interest in the region." We will have to look in the region of the compact to, at least, have some basis for our decision. Of course, you have the factor that I believe every State in the region has approved the compact.

NORTHEAST DAIRY COMPACT

Senator KOHL. Is it not also true, Mr. Secretary, that compelling public interest in the region—there would be compelling public interest in regions all over the country for all kinds of reasons and all kinds of industries to segmentize and balkanize American commerce which is specifically something that I do not think you would ever agree to. You probably would rather resign your job than agree to that concept for the American economy. Will that be part of your thinking?

Secretary GLICKMAN. Again, I have got to implement the statute. We will do the necessary review of this in our efforts to disclose other alternative market mechanisms. Obviously, you cannot look at this issue without looking at the total dairy picture.

Senator KOHL. A compelling public interest. If it occurs how they want it to occur, the public will pay more for milk in that region.

Secretary GLICKMAN. Could I ask my milk expert to comment on this?

Mr. COLLINS. Far be it from an economist to say positive things about the compact, but in its defense, and one thing that should be accommodating to you, is that one of the most troubling provisions in the original compact was the ability for the New England States to impose a compensatory charge on any milk or dairy products that come into the Northeast region.

What the farm bill does is to allow the Secretary, under discretionary authority, to grant compact status in the Northeast, but it precludes that compensatory charge. So, the compact commission

cannot impose a charge on fluid milk or dairy products that come into the Northeast.

Now, that in itself is going to act as a brake, as a limit on just how high the commission can set their over-order charge on the minimum fluid price in the Northeast region. That is an attempt to make it less economically distortive I believe, and that should help somewhat.

Senator KOHL. Well, it may be true, but the purpose of the compact is to see to it that the farmer gets more for his product and therefore the consumer pays more for that same product. We all understand those things and we will have plenty of opportunity to discuss it.

But it certainly does not reflect the American economic system and how it operates in our country. That is why they said a compelling regional interest because they wanted to get the language that would preclude the way in which our economy operates, and the language then gives you that opportunity to subvert the way in which our economy operates in this country and the way it is intended to operate.

I certainly hope that when this comes up, you will recognize that the House did not vote it, that the Senate voted it down, and that we have been debating it here now. It is not the way we want American business to function, and I think you recognize that and I hope that when the time comes, we will all have a chance to weigh in as to what represents good policy. That is all.

NATIONAL CHEESE EXCHANGE

Last question. Mr. Secretary, for the past years this subcommittee has funded important research conducted at the University of Wisconsin, Madison, by the Food Systems Research Group. The focus of their research has been antitrust issues in food systems. I have been particularly interested in their 3-year investigations into the problems of the National Cheese Exchange in Green Bay, WI. The results of that investigation were just made public last week.

I was disappointed, though I was not surprised, to see the results of the investigation into the market failures of the National Cheese Exchange. Although less than 1 percent of all cheese in the Nation is traded on this market, the price determined by that market acts as a reference price for almost all the bulk cheese in the country and greatly influences milk prices paid to farmers as well. Because this market is so thinly traded, it does provide opportunities—I am not suggesting it occurs, but opportunities—for large traders to manipulate prices. I believe that dairy farmers deserve to know that cheese markets are adequately regulated and that no single market player is exercising excessive influence on national dairy product prices.

Yesterday the National Cheese Exchange announced plans to allow electronic trading to encourage broader participation in the market. However, given what I believe are serious flaws in the National Cheese Exchange, I believe that we ought to strongly consider totally replacing that market. However, before this is done, I believe that it would be helpful for USDA's Economic Research

Service to provide the dairy industry and this committee with some recommendations on alternatives to the National Cheese Exchange.

Would you, Mr. Secretary, be willing to have the ERS recommend some alternative cheese pricing market mechanisms?

Secretary GLICKMAN. I would say that both the Economic Research Service and our Agricultural Marketing Service are looking at this right now. We just got the report. In fact, I have a copy of your letter that you wrote to the Chairman of the Federal Trade Commission, as well as other correspondence. The report has got some things in there that concern us as well.

We are going to review this Cheese Exchange report seriously, and we will keep you informed as to what form we are going to do it. I just asked Keith's shop and the Agricultural Marketing Service to take an initial look at this, to determine what they think we ought to be doing on it.

But we rely on those same numbers as well because we use them in our programs. We are, in a sense, a user of this information and we would benefit by making sure that it operates without any problem. So, we are going to take a very close look at the report.

Maybe Keith would like to comment on how we use it.

Mr. COLLINS. We use the Green Bay Cheese Exchange prices to adjust the basic formula price for milk every month. It is sort of the mover or the floor price on which all of the other milk prices are set. So, we use the cheese prices from that exchange to adjust that formula price every month.

We also use the cheese price from the exchange to set protein differentials in those market orders that have multiple component pricing.

It is used by our Federal milk marketing order system; therefore, it is important to us to ensure that it is a fair representation of the market. We are going to look very seriously at that report to make sure that that is what is going on.

Senator KOHL. Good.

Thank you, Mr. Chairman.

Senator COCHRAN. Senator Gorton.

NORTHEAST FOREST PLAN

Senator GORTON. Thank you, Mr. Chairman.

Mr. Secretary, obviously in the discretionary portions of your budget for this next year, you have had to deal with serious priority questions in an austere fashion. If my reading of the budget is correct, one of the few areas in which you have a significant increase is in connection with the President's Northwest forest plan. You say in that connection that you are going to seriously deal with questions of watershed assessments and extensive monitoring to see that the Northwest forest plan's standards and guidelines are met, that technical and economic assistance to communities and individuals who have been dependent on Federal timber supplies will be considered, as well as ecosystem planning.

I guess my question to you is, Will it be the result of a degree of generosity on the part of this Congress in connection with the Northwest forest system?

Can you give me any indication that that will result in a more rapid achievement of the President's own harvesting goals? Will

this get you to the harvesting levels that were promised at the time at which the plan was adopted, which as you know, have been a long way from having been reached, any more rapidly, or is this money just simply going to be spent on studies?

Secretary GLICKMAN. I suspect the money is going to be spent on several parts of implementing that bill.

I would have to tell you that, while I know that we have had some disagreements on specific implementation of the plan, as well as timber harvesting, we believe, in fact, that we are meeting the timetables on that plan.

Quite frankly, as you know, there has been a tremendous amount of litigation. Many sales—not even the contested sales—many uncontested sales get stopped a lot. We kind of get criticized—damned if you do, and damned if you do not—by both sides of the equation here.

We looked at the forest plan, as you know, as a way to sensibly resolve the conflict. Although the conflict is not resolved, I believe it was a sensible way to try to deal with the various utilizations of the forest.

Our goal is to continue to meet the goals that we said we would promise in harvesting, as well as, the other uses of the forest. We see the forest plan as the way to achieve it. Without the forest plan, my judgment is that we do not know what the Federal courts are going to do. Some judges are ordering us to cut things we do not think ought to be cut; in other places, we believe we could find the whole process shut down. So, Senator, I guess we are pursuing this on the basis of honoring the timber cutting promises that we made. We believe we are going to meet those targets.

Senator GORTON. Well, for my question, that is the bottom line. We can disagree on whether or not the plan represents an appropriate balance, but at this point I am simply asking you whether or not this appropriation will help you, if the increase is granted, more rapidly to meet the goals of your own plan.

Secretary GLICKMAN. I would hope so. At least, that is what I am told. The forest issue is kind of a wonder-world of unanticipated consequences. Wherever we go, we seem to hit closed doors from the extremes on both sides of the issue. But, yes, it is our goal that that money will help us meet our objectives.

MARKET ACCESS PROGRAM

Senator GORTON. On another subject, we have had extensive debates in the Senate, in which I have participated, in which the chairman and the ranking member of this subcommittee have taken opposite sides, on the Market Promotion Program. I guess you now call it the Market Access Program.

One of the compromises that was made cut down on the definitions of who was eligible. I would like to know, if you can tell me, the extent to which those changes have been implemented, who were the kinds of groups that previously participated who can no longer participate, and whether or not you think that reduction in the scope of the program has had an adverse impact on our success in selling overseas.

Secretary GLICKMAN. That is a good question. I wish Gus Shumacher, the Administrator of the Foreign Agriculture Service,

had stayed so he could address your question. Let me make a couple of comments.

No. 1, we think the amount we spend on market access or market promotion is piddling compared to what the needs are. I am told—and this is anecdotal—that the French spend about as much promoting wine in the world through a market promotion type program as we spend promoting all U.S. agricultural products.

So, I know this issue gets a lot of interesting rhetoric, and I understand it because the question is should very large, well-established agri-business companies get the benefit of MPP funds. Quite frankly, with limited resources, you ought to get these dollars in to people who do not have their own resources to do the promotion. I think those are changes that we have attempted to make. We have tried to get more resources into promotions by small-sized firms.

For example, from your State. I was in Indonesia not long ago. Jakarta is a changing world. It is not like probably what it used to be, but in the poorest parts of the city I saw fruit stands with signs "Washington State apples," and I saw people who could hardly speak English say, "get your Washington apples here." That would have been music to your ears if you had been there.

Senator GORTON. Obviously. [Laughter.]

Secretary GLICKMAN. Those were MPP-related efforts. The fact of the matter is Indonesia is now buying almost as many apples from the United States as we sell to all the countries of Europe. That just did not happen. These results take effort.

So, I think what we have been trying to do is to get these efforts to promote product lines, build an affinity to a product, whether it is fresh fruits and vegetables or is meat and poultry, that people cannot really do by themselves.

I think there was some legitimate criticism about very large American business interests taking money from this program when they have multimillion-dollar advertising budgets. The Deputy has been very involved in this issue to try to focus the program more.

I have not read all the language that Congress put in the Market Access Program changes, the statutory changes, but I do not think it will have a dramatic, negative effort on our ability to promote our products. I still think we spend far too little money on it.

Senator GORTON. If, when you speak to your expert on this, you can answer these questions more precisely about who has been cut out and whether or not it does seem to have an impact, I would appreciate an answer to that question.

Secretary GLICKMAN. Yes; I will make sure that Gus Shumacher gets you a specific answer.

Senator GORTON. But I am delighted at your anecdotal evidence of what you saw in Jakarta.

WAHIAKUM COUNTY CONSERVATION DISTRICT

Now I am not even sure whether this falls within Mr. Rominger's area or not, but I can tell you I was tremendously impressed with his ability to answer a single-county question in Kentucky and I am going to try one on you myself. If you cannot, if you will get back to me with the answer, I would appreciate it.

I just recently was contacted by the Wahkiakum County Conservation District, the second least populous county in the State of Washington. The program coordinator there says that projected funding for that county has been reduced by 90 percent, which seems to me to be rather extreme. I wonder if you could get for me an answer as to whether or not that is true and, if so, why a single conservation district suffered such a reduction.

Mr. ROMINGER. It is true I cannot answer that question for you today. I do not have the answer to that. I did just meet with the Conservation Districts Organization yesterday when they were in town here and talked about a number of districts, but this one did not happen to come up. But I will get the information on that.

I can say that we have given more flexibility to the States in allocating money to the different districts, but I will follow up on that.

[The information follows:]

LETTER FROM RICHARD E. ROMINGER

Hon. SLADE GORTON,
Subcommittee on Agriculture, Rural Development and Related Agencies, Committee on Appropriations, Senate Hart Office Building, Washington, DC.

DEAR SLADE: I am writing to provide additional information in response to questions that you raised with Secretary Glickman at his recent hearing before the Subcommittee on Agriculture, Rural Development and Related Agencies.

First, we have looked into funding for conservation programs in response to your concern regarding reduced allocations for Wahkiakum County. I believe that this concern relates to the Agricultural Conservation Program (ACP). ACP provides funding for financial assistance to agricultural producers to help solve a wide range of agricultural conservation and environmental problems. Funds for the ACP are allocated to State Farm Service Agency offices soon after the beginning of the fiscal year, following enactment of appropriations. Allocations are made to States and territories based on their proportional needs to address soil and water conservation problems. In turn the State determines the allocations to the counties. ACP funding levels for the total program, Washington State, and Wahkiakum County for 1994, 1995, and 1996 are as follows:

	1994	1995	1996	Percent change 1994 to 1996
Total ACP	\$194,650,000	\$100,000,000	\$75,000,000	- 61
Washington State	4,624,000	2,221,000	1,572,000	- 66
Wahkiakum County	22,306	24,438	9,500	- 57

As you can see, ACP allocations to the State of Washington and Wahkiakum County have been reduced in roughly the same proportion as the total funding for ACP. In addition, we understand that the State office changed the allocation formula in 1996 to reflect the current trends in land use. Since the proportion of agricultural land to forestry land in Wahkiakum County is reduced from previous years, the ACP allocation was reduced from 1995 to 1996.

I also want to respond to questions that you raised at the Secretary's appropriations hearing about the Market Access Program (MAP), formerly the Market Promotion Program. Your questions centered on recent changes in eligibility for MAP funds and whether the reduced program scope has adversely affected our success in overseas sales. Enclosed is an explanation of the changes made and implemented in MAP.

Thank you again for your interest in ACP and MAP. I appreciate the opportunity to respond to your concerns.

Sincerely,

RICHARD E. ROMINGER,
Deputy Secretary.

Enclosure.

MARKET ACCESS PROGRAM

Significant changes have been made in the Market Access Program (MAP), formerly the Market Promotion Program, over the past 5 years in an effort to strengthen administrative controls, improve program oversight, address criticism, and preserve the integrity of the program. For example, the Omnibus Budget Reconciliation Act of 1993 modified the statutory authority governing the MAP to: (1) ensure that small businesses receive priority assistance for branded promotions; (2) limit branded promotion activities on behalf of a product to 5 years in a single market; (3) require certification that MAP funds are used to supplement, and not supplant, private sector funds; (4) authorize the use of independent program audits; (5) prohibit tobacco promotion; and (6) require a minimum 10 percent private sector contribution for generic promotions (branded promotions require at least a 50 percent match). Regulations implementing these statutory changes were issued on February 1, 1995, and were used to determine fiscal year 1995 MAP funding allocations.

The Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act for Fiscal Year 1996 imposed additional limitations on MAP. That legislation eliminated direct assistance to mink trade associations, large for-profit corporations and foreign for-profit corporations. The prohibitions on direct assistance to large for-profit corporations and foreign for-profit corporations have now been made permanent with passage of the 1996 Farm Bill—the Federal Agriculture Improvement and Reform Act of 1996. Under these restrictions, USDA is prohibited from entering into agreements providing direct assistance to the U.S. Mink Export Development Council and to those large corporations previously eligible for funding under the Export Incentive Program component of the MAP. Thus, under the new law, the Department may enter into MAP agreements only with small businesses, cooperatives, and trade associations. Because these limitations take effect with the 1996 MAP funding allocations—expected to be announced shortly—it is difficult to assess their impact at this time.

We believe, however, that steadily reduced funding levels for the MAP, from \$200 million annually in 1992 to the \$90 million provided for each fiscal year 1996 through 2002, will have a significant adverse impact on our ability to promote U.S. agricultural exports. For example, funding reductions already have forced one commodity group (prunes) to conduct regional—as opposed to national—campaigns in a target market. Similarly, commodity groups have had to forego television advertising campaigns in favor of less expensive merchandising promotions, which invariably reach a narrower audience. The fact that carryover balances of prior year funding under the MAP have largely been exhausted, coupled with reductions in new funding for fiscal year 1996, will result in the typical MAP participant receiving far fewer funds for export promotion beginning this year.

AMENDMENT TO THE MARKET ACCESS PROGRAM

Senator GORTON. Thank you.

Secretary GLICKMAN. I just might mention we have a copy of the initial report on the farm bill, and it says the amendment to the Market Access Program provides that funds may not be provided to foreign, for-profit corporations, not including U.S. subsidiaries, to fund their own campaigns to promote their foreign-produced products. Maybe there is something else in there that I am not reading, but I do not believe there is.

Senator GORTON. Were you doing a significant amount of that before?

Secretary GLICKMAN. I do not think so.

Senator GORTON. I cannot imagine you were.

Secretary GLICKMAN. I hope not.

What I am saying is that the legislation does not seem to reflect any major change.

Senator GORTON. Thank you. I have some other questions that I will submit in writing, Mr. Chairman.

Senator COCHRAN. Thank you, Senator Gorton. Senator Kerrey.

Senator KERREY. What happened to your voice?

Senator COCHRAN. It is a wreck. I have been overwhelmed by the Democrats here. [Laughter.]

FARM BILL BUDGET DIFFERENCES

Senator KERREY. Mr. Secretary, I would just like to focus a bit on the budget differences that you have got in here for mandatory versus discretionary spending. As I understand it, when Senator Bumpers asked about the farm bill, as we have just conferenced it, Mr. Collins said that the current law over the next 7 years would be \$7.6 billion in deficiency payments and that the new farm bill would be——

Mr. COLLINS. No.

Senator KERREY. \$11.6 billion?

Mr. COLLINS. \$11.2 billion.

Secretary GLICKMAN. \$11.2 billion.

Senator KERREY. \$11.2 billion, and the new one is how much?

Mr. COLLINS. About \$36 billion.

Senator KERREY. So, you would expect an adjustment up. You would have to modify your budget up in this year? You are asking for \$59 billion in budget authority compared to \$54 billion for 1996, and of that \$59 billion, \$46 billion of it is mandatory.

Secretary GLICKMAN. That is correct. We would have to up our budget.

Senator KERREY. You would have to up your budget from \$59 billion to some number, whatever it is.

Secretary GLICKMAN. We think it is between \$3 and \$3.5 billion this year is the difference in the payments.

Senator KERREY. I personally think that is taking us in the wrong direction, but I do not think that the agriculture mandatory programs are the principal culprit. And it is those other programs that I would like to talk to you about a bit.

DISCRETIONARY PROGRAM SPENDING

This budget is \$13 billion. The discretionary part is \$13 billion, and that goes for FSA, rural development, natural resources, research, education, and all that, stuff that we are going to be, hopefully, having hearings on and talking about.

Now, that represents about a 1.5-percent increase over last year overall, which if you take just inflation, that is a real cut. Right?

Secretary GLICKMAN. Right.

Senator KERREY. We are cutting compared to what we had last year. I think in overall discretionary spending, there is a total cut of about \$10 billion overall versus what we had last year.

Mr. Secretary, we can probably limp through this year without a great deal of stress upon anybody. I think we are going to be underfunding research and we are going to be underfunding conservation, and we probably are not going to have enough in FSA to handle a brand new program. We have got lots of things people are going to be complaining about. We have got food safety concerns that we probably are not going to be able to meet. We are going to hear complaints from citizens that something is not being done, and the bottomline answers will have to be, well, the reason is we just do not have enough money in this account to do the thing that needs to be done. That is my own guess.

Under the President's budget, Mr. Secretary, the 7-year balanced budget proposal that he submitted I guess last week or the week before that, by 1999 we have got to cut \$34 billion. By the year 2002, we have got to cut \$96 billion.

Now, let us say hypothetically for the moment—my favorite hypothetical—that the President is reelected and you stay as Secretary for another 4 years. What are you going to say to this committee in 1999? Where do you get \$34 billion out of this budget?

Secretary GLICKMAN. Let me tell you first of all the items that I believe we have to be extremely careful not to cut and then we figure out what is left.

I suspect that the public will demand, regardless of the HACCP rules, that we fully fund our food safety function.

Senator KERREY. You are presuming that in 1999 you can come up with a sufficient amount of cuts to meet that target. Why not do it now then if that is the case? If we can cut \$34 billion of the budget in 1999, why not do it now?

Secretary GLICKMAN. You are talking about \$34 billion in savings.

Senator KERREY. Under the President's overall balanced budget proposal, between now and 2002, the numbers show that we have got to cut \$34 billion out of domestic discretionary.

Secretary GLICKMAN. Right.

Senator KERREY. And we have got to cut \$96 billion out in 2002. Why wait? Let us do it now.

How would you cut \$96 billion? Let us presume that agriculture would only have to give up about \$5 billion. That would be my guess, just sort of back-of-the-envelope, seat-of-the-pants guess. Instead of having \$13 billion, we would be down to \$8 or \$9 billion. Tell me how you construct a budget with \$9 billion?

Secretary GLICKMAN. Well, you could fire one-half the people in the Farm Service Agency and in our rural development function. There are ways to get down there.

Senator KERREY. Let us do it now then. Let us do what the President says we have to do in 2002. Let us go through the exercise. Otherwise, let us alert Americans that we have got to change these mandatory programs. The President allowed the defense bill to go in without his signature, and now we are locked into trying to find out where do we come up with money to fund five appropriations bills and we are selling off assets.

Secretary GLICKMAN. Yes.

Senator KERREY. One possibility is go get a hold of Michael Eisner and convert them all into a Disney theme park and get enough money to come up with \$96 billion. We are not going to be able to sell off assets to close that gap. Well, let us tell Americans we have to do something about mandated programs.

Secretary GLICKMAN. I would say, Senator, that it is an interesting phenomenon that this farm bill does spend \$20 billion more than what would be spent under current law.

Senator KERREY. But the big mandatory programs are Social Security and Medicare, Mr. Secretary, and we all know that.

Secretary GLICKMAN. Right, but you are asking how I would look at my programs.

DISCRETIONARY PROGRAM SPENDING

Senator KERREY. Social Security is not even on the table. We have got a \$120 billion increase in Social Security payments from this year to 2002. It is not even under discussion. Indeed, we are going to pass probably with 99 votes, mine excluded, to take the earnings test off. You know, it is an election year. Let us have some fun. People over 65, 80 percent of them vote. I got that deal figured out.

But let us construct a budget. Let us cut \$90 billion right now. Why wait to 2002?

Let us tell Americans what we are going to be doing in 2002.

Secretary GLICKMAN. Some of these questions are extremely thoughtful, but they are a little bit beyond my pay grade right now. I have to deal with this particular budget.

Senator KERREY. Mr. Secretary, it is not above your pay grade. I am presuming and hope to help, although these questions may not help—

Secretary GLICKMAN. They help. They are useful. They get me to think.

Senator KERREY. You are going to be Secretary in 1999, and under your President's budget, my President's budget, the chairman's President's budget, there is a \$34 billion cut in 1999. No. 1, why wait? If we are going to cut it in 1999, why not do it now? And, No. 2, if you accept that we are going to do it now, how do we do it? How do we cut \$34 billion?

Secretary GLICKMAN. Obviously, you have to look at entitlement programs to cut that kind of money.

Senator KERREY. I rest my case. I think we are kidding ourselves. We are going to patch up 1996. I think eventually we will get a continuing resolution passed of some kind, and we will sort of limp through this year. We will have some asset sales so as not to have to go too deeply into these mandatory programs. But you cannot do it. You cannot cut \$96 billion. There is not a person on this Hill—I do not believe there is one person in the House or the Senate that would vote for a budget that would cut \$96 billion out of domestic spending this year. I do not think you could find a single person up here.

If that is the case, then why do we not just tell the American people that? Why do we not tell them that we have got to change the mix of mandated versus domestic spending? When are we going to do it?

Secretary GLICKMAN. You keep working. It will get done. [Laughter.]

Senator KERREY. I think American citizens are going to say our food is not as safe as it ought to be because we are going to be short money. They are going to be madder than heck at us because the Farm Service Agency is not going to be able to get everything cranked up by the 15th of April. I do not know how they would do it with all the new programs that they have got. You are going to have complaints across the board of people saying that our Government is not doing what we expect it to do. We should be saying to them, you think it is bad now, wait till you see 1999, wait till you see 2002. We are headed in a direction where we are going to con-

vert the whole darned Washington, DC, bureaucracy into an ATM machine. All we are going to be doing is transferring money.

Until we start telling the American people that, it is going to be very, very difficult for us to get permission, and absent permission, we eliminate the earnings test and continue to tell people that we are on a steady glidepath to a balanced budget when I just do not think that we are in fact.

Secretary GLICKMAN. I hear you.

Senator KERREY. Do you agree with me?

Secretary GLICKMAN. I generally agree with you. Again, I spent 18 years trying to wrestle with these larger macro questions, and I am not saying that I am any closer to understanding them now.

Senator KERREY. This one is even more terrifying for me because it is one of the macroquestions that is impossible to change. I can jog, I can eat right, I can do all sorts of things, I do not get years back. When you are dealing with retirement, that is essentially what we are talking about here. People who are going to suffer the most are those who are going to suffer as a consequence of our having delayed. That is my own view.

We are going to have two people working for every retiree in another 15 years. My generation has got 77 million people in it that are going to start to retire in 2008.

We are headed in a direction where we are spending less on research than we ought to be, less on a productive foundation, our people, our natural resources than we ought to be. And we are going to wake up. The light is going to go on, and you say, oh my, God, can we get it back? And the answer is, No, you cannot get it back. These investments are accumulated a little bit at a time. It is not a cut that I think you can repair.

Secretary GLICKMAN. It is true. If you ask me to talk about whether we continue to go down the same glidepath, that we can properly protect public health and safety, which I think is the critical function of Government on the discretionary side of the picture, whether it is the FAA or food safety, we are worried about that. This whole BSE issue is of the same magnitude. While it is not a problem in the United States, it is the kind of thing that could become more prevalent in the world when we have a variety of food safety-related issues. We have to have the resources—and those are on the discretionary side of the budget—to deal with them.

DISCRETIONARY PROGRAM SPENDING

Senator KERREY. The agriculture budget on the discretionary side is, what, about 4 percent of the overall of all discretionary spending? Is that how you would calculate it? Something like that? So, if you have got \$100 billion you got to cut in 2002, you are looking at dropping \$4 billion. So, it is pretty close to my back-of-the-envelope. You cannot do it. That is the hardest fact.

I think until we start telling people not how do we cut, how do we do a \$200 million increase—that is basically what we are dealing with right now. You can bring your budget up here and say I am going to go up \$200 million, you leave people with the sense that everything is cool. Everything is fine. It is not fine. By the time you get out to 2002, we will have effectively taken \$4 billion out of this year's budget.

So, I think we ought to roll that tape forward and talk to the American people honestly about what we have to do, what would our Government look like if we took \$4 billion out of USDA this year. That is my humble opinion.

Secretary GLICKMAN. It would not be pretty.

Senator KERREY. Thank you.

Senator COCHRAN. Thank you, Senator Kerrey.

Mr. Secretary, thank you very much for being here.

Senator Burns was here earlier and asked that I reserve in his behalf the right to submit some questions to you in writing which he would appreciate your answering for the record. And there may be other Senators as well who would like to do that. We will keep the record open for that purpose for a reasonable period of time.

There were some discussions about provisions of the farm bill and what they mean. I know Senator Kohl touched on the differentials in the milk marketing orders. I just have to say for the record so that there will not be a misinterpretation of the fact that there was not some comment on the other side of that, that the farm bill provision does not direct the Secretary of Agriculture or even authorize the Secretary of Agriculture to eliminate class I differentials. At least that is the opinion of this conferee.

There were other comments, of course, by others. It was an interesting hearing and I thought that it was beneficial for all of us to have your testimony.

SUBMITTED QUESTIONS

I have a number of questions to submit as well.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

CROP INSURANCE

Question. Mr. Secretary, you indicated in the Farm Bill debate, and mentioned in your prepared statement today, that the Administration opposes the elimination of delivery of crop insurance by the Farm Service Agency. What is your reaction to the provision which was included in the conference agreement on the Farm Bill which provides you with the authority to terminate dual delivery in those areas you determine have adequate delivery services?

Answer. I find the conference agreement on this provision unfortunate. I supported the crop insurance reform legislation that was enacted in 1994 which, as you know, provided for the dual delivery system as well as mandatory linkage. Congress is now acting to repeal these provisions. I believe such action is contrary to the initial intent of the reform effort to maximize participation in crop insurance as a replacement for *ad hoc* disaster payment assistance. An "adequate" delivery system or as the agreement also states a "sufficient" one is simply not as high a standard as had been expected when the dual delivery system was put in place. However, crop insurance should remain a very cost effective way for producers to protect against risk and the Department will do everything possible to encourage producers to participate in the program.

Question. Do you anticipate utilizing this authority?

Answer. The legislation requires that delivery of catastrophic coverage through Farm Service Agency offices be limited to areas that do not have a sufficient number of private insurers to provide adequate coverage. That means that FSA could no longer deliver catastrophic coverage in areas with sufficient private insurance coverage. I would be required to make the determination of sufficiency in consultation with the private insurance industry.

Question. If so, what impact will this have on the Farm Service Agency budget estimates?

Answer. Under current law, FSA receives the \$50 processing fee for the catastrophic coverage it delivers. This amounts to about \$30 million in fees that are used to pay salaries and expenses. With the elimination of FSA delivery, there would be a decrease in both the amount of funds available for salaries and expenses and in the workload. It is important to note that FSA did not receive additional staffing, in 1995, for delivery of crop insurance, rather, the increased workload was handled by redirecting staffing from other responsibilities. In order to retain staffing at current levels, the amount appropriated for salaries and expenses would need to be increased to offset the loss of revenue from crop insurance fees.

RURAL DEVELOPMENT PERFORMANCE PARTNERSHIP INITIATIVE

You mention that the budget includes a proposal similar to the fiscal year 1996 budget for a Rural Performance Partnership Initiative. This proposal would consolidate funds for 14 rural development programs within the jurisdiction of USDA. The Fiscal Year 1996 Agriculture Appropriations Act did consolidate funds for three Rural Utilities Service Programs - Water and Waste Disposal Loans, Water and Waste Disposal Grants, and Solid Waste Management Grants.

Question. How has this consolidation worked? Would it not be a good idea to complete an entire fiscal year before moving to consolidate funds of more of the rural development programs?

Answer. In the 1996 appropriation, Congress limited the Performance Partnership Proposal to three programs, Water and Waste Disposal Loans and Grants, and Solid Waste Management Grants, and

called it the Rural Utilities Assistance Program (RUAP). Under RUAP, states can switch up to 25 percent of their funding between programs. To date, six states have requested that funds be switched from grants to loans and one state has requested that funds be switched from loans to grants. It is too early to tell what the allocation will be at the end of the fiscal year. But, the experience to date does indicate that it is a good idea to provide flexibility for funding the rural development programs. The flexibility RUAP has provided is already opening up opportunities to improve the mix of water and waste disposal assistance within states. RUAP is a step in the right direction, but the Performance Partnership Proposal would provide far greater opportunity because it would extend over a much broader range of programs. It would include 14 program in three categories - rural housing, rural utilities, and rural business. It would give real choice for using the funds for these programs to meet state and local needs. I see no reason to wait for more experience under RUAP. I am confident that we are moving in the right direction and that we are ready to go forward.

Question. The Farm Bill includes consolidation of some rural development programs, but does not include rural housing programs, which are under the jurisdiction of the Banking Committee in the Senate. Do you anticipate that you will revise the Rural Performance Partnership Initiative request to comport with the Farm Bill?

Answer. The majority of the rural housing programs were not included in the Performance Partnership Proposal. The Performance Partnership Proposal includes only part of the funding requested for the rural rental housing program, the portion that would be used for new construction, as well as the portion of the rental assistance budget that would be used for these projects. But as you note, the Farm Bill's Rural Community Advancement Program, while preserving many of the features of the Administration's Performance Partnership Proposal, excludes the portion of the rural rental housing program that is included in the Administration's proposal. As we go about implementing the Farm Bill, we will also be assessing whether or not to propose additional legislation to correct some of the shortfalls or to amend our 1997 budget to conform to the bill. I would note, however, that we have other matters relating to the rural rental housing program that we will be discussing with the Banking Committee, so there will be a vehicle for opening up the question of including the program under RCAP.

RURAL HOUSING

Question. Does the Department intend to submit proposed language to the committees of jurisdiction to modify the housing programs?

Answer. We are proposing several legislative changes to the House Committee on Banking and Financial Services and the Senate Committee on Banking, Housing and Urban Affairs that we believe will improve various aspects of our housing programs. Several of our legislative proposals relate to implementation of the Dedicated Loan Origination and Servicing (DLOS) System for our Single Family Housing Program. DLOS-related proposals include allowing the use of excess earnings on escrow accounts for administrative expenses, eliminating the seldom-used deferred mortgage demonstration program, and requiring borrowers to pay recapture upon refinancing. Proposals relating to the Rural Rental Housing program include increasing the equity contribution of developers, and reducing the term of the loan from 50 to 30 years.

RURAL DEVELOPMENT

Question. You note in your prepared statement that the President's budget proposes a \$2 billion increase for FY 97 for rural development programs, from \$7.8 billion last year to \$9.8 billion this year. This program-level increase, you state, will

cost only an additional \$100 million, from \$2.1 billion last year to \$2.2 billion this year. Is it true that these program-level increases are dependent upon the optimistic economic assumptions upon which the President's budget is based?

Answer. Interest rate reductions that are reflected in the economic assumptions used to develop the President's budget have been particularly beneficial to our rural development programs. This is one of the primary reasons that we have been able to accommodate a substantial increase in the loan levels for these programs while staying within the President's targets for a balanced budget. The fact of the matter is that interest rates have already declined, and we are optimistic that they will continue to decline. I believe our budget is based on realistic assumptions. However, there is always some uncertainty involved in projections of economic conditions, and there will be opportunities to update our estimates of subsidy costs and program levels which are affected by interest rate changes. Normally, we do such an update at the start of each fiscal year. Also, we understand that the Appropriations Committees will be consulting with the Congressional Budget Office on the assumptions and estimates it will use in the appropriations process. It is important that we have a full understanding of how estimates of subsidy costs and program levels are constructed for use in the appropriations bills, as well as in the administration of programs after those bills are enacted into law. If the Department, can be of assistance in furthering a better understanding of these estimates, please feel free to call on us.

CREDIT PROGRAMS

Question. The budget also includes what appears to be a fundamental change in the Department's priorities for credit programs. There appears to be a shift in emphasis for credit programs from direct loans to guaranteed loans. In the past, there has been opposition for substituting guaranteed loans for direct loans. If the economic assumptions upon which the budget is based do not come true, and Congress concurs with the request of the President, will we not be harming most the people who need these credit programs most?

Answer. In our farm credit programs, there has been a long running trend toward placing greater reliance on guaranteed loans and reducing the level of direct loans. This trend has been encouraged by Congress in both authorizing legislation and appropriations. Our 1997 budget is consistent with this trend. Guaranteed loans have proven to be a valuable tool in assisting producers in obtaining commercial credit and in graduating our direct farm credit borrowers to commercial credit.

However, in our housing programs, guaranteed lending has been a more recent phenomenon. The guaranteed loan program for single family housing was not established until 1991. But, it became very popular quickly, breaking the \$1 billion mark in 1995 and will reach \$1.7 billion in 1996. The 1997 budget would support \$2.4 billion in guarantees for this program. But, I want to emphasize that the increase in funding for this program is not a substitute for direct loans. In fact, the 1997 budget provides for an increase in direct loans for single family housing from about \$1 billion in 1996 to about \$1.3 billion in 1997. Single-family housing direct and guaranteed loans serve different customer bases, individuals receiving assistance through our direct loan program would rarely qualify for a commercial loan, even with the benefit of a USDA guarantee. Guarantees are normally available only to those families who have higher income than our direct loan borrowers.

FARM BILL

The budget notes that the assumptions included in it are based upon current law - that is the 1990 Farm Bill.

Question. Assuming that the President will sign the Farm

Bill which was reported by the Conference Committee last week, do you anticipate that you will submit revised budget requests for certain programs based upon the new law?

Answer. We are in the process of reviewing our pending budget request in light of the Conference version of the Farm Bill. My initial reaction is that there will be a need to send some revisions to the Congress in certain program areas. We will work with OMB during the coming weeks to finalize our plans.

Question. If so, what changes do you anticipate and when do you expect to submit them?

Answer. As I understand the Conference bill, some of the conservation programs would be funded through the Commodity Credit Corporation and not require the separate appropriations that we have requested in our budget. The bill would create an Office of Risk Management to supervise the crop insurance programs, so we will probably need to make some changes to reflect that move. There is also at least one program, the Medical Link loans program, for which we requested funding under proposed legislation, which is authorized in the Conference bill. There may well be other changes that we have not yet identified, but we do intend to work with OMB and the Congress to present in a timely way our best estimate of the budget needs that we have to carry out the new legislation.

BOLL WEEVIL ERADICATION LOANS

Question. Mr. Secretary, in the Senate report accompanying the Fiscal Year 1996 Agriculture Appropriations Act, the Committee urged you to utilize your authority to promulgate regulations which would establish a loan program for the boll weevil eradication program. Have you taken any action with regard to this report language?

Answer. The Department worked with some of the foundations that operate the program at the state level in response to inquiries about using the business and industry loan guarantee program to assist the foundations in obtaining credit from private lenders for program operating expenses. However, no application for such assistance was ever received. With regard to the assessments that producers pay to participate in the boll weevil eradication program, such assessments may be an eligible loan purpose under existing regulations for the farm operating loan program, although there is no indication that the program has been used for this purpose. Further, the farm operating loan program is limited to family farmers who cannot obtain credit elsewhere.

Question. Do you support the establishment of a loan program which allows for the expansion of this extremely important program during a period when appropriations may not be able to keep up with the rate of growth in the existing program?

Answer. see no reason to establish a separate program for this purpose. The Department has programs that can be used to address the credit needs associated with the boll weevil eradication effort. Private lenders could be reluctant to make loans to the foundations if there are uncertainties regarding the payment of assessments or other conditions, in which case, the business and industry loan guarantee program, in particular, could be helpful.

WETLANDS RESERVE PROGRAM

In the Senate report accompanying the fiscal year 1996 agriculture appropriations bill, the committee urged you to utilize your authority to "explore all options available" in purchasing easements for the Wetlands Reserve Program. It is my understanding that the Department has entered into a cooperative agreement with the National Fish and Wildlife Foundation for this purpose.

Question. What does the Department intend to achieve from this agreement?

Answer. Exposure of the WRP program to various public sectors through the use of the Foundation will greatly enhance the acquisition of program easements. This effort will provide the Department with valuable experience in fund leveraging, that may also be applicable to other programs. The end result will be greater overall program benefits at a reduced cost to the taxpayer.

Question. Are there other programs where the Department could realize significant cost savings from similar cooperative agreements?

Answer. It would be premature at this time to speculate on the outcome of this venture since this effort is just beginning. Fund raising efforts have begun, but not the actual project implementation efforts yet. Analysis of the project overall results will be known in the future.

Question. Do you intend to pursue these?

Answer. Upon a full analysis of the project results, a dialog may be undertaken to explore the scope of future applications pertaining to this venture.

USDA REORGANIZATION

Mr. Secretary, you mention in your statement that the President's budget assumes the ultimate closure of about 1,200 field offices of USDA.

Question. Now that we have a Farm Bill, do you anticipate that with the new structure of farm programs that it will be necessary or appropriate to close additional field offices.

Answer. We anticipate that the Farm Bill will require changes to our field structure. Once the Farm Bill is passed we will evaluate our business under these new circumstances, and, if necessary realign our field structure with that new business.

Question. Can you give the subcommittee a brief explanation of the Washington Strategic Space Plan?

Answer. The goal of our Washington Strategic Space Plan is the consolidation of USDA Headquarters into two government-owned locations to house our employees in safe and modern facilities, enhance USDA operations, and reduce our facility costs. It consists of two major projects - the new USDA Office Facility in Beltsville, Maryland and the modernization of the Agriculture South Building to correct serious safety hazards.

The design of the USDA Office Facility, to be located on government-owned land at the Beltsville Agricultural Research Center, has been completed. The facility has been designed as a low-rise campus of four interconnected buildings of 350,000 gross square feet to house about 1,500 employees. An agency or group of agencies will be moved permanently to the facility as the first step of our effort to consolidate USDA headquarters and to eliminate USDA's need to lease expensive office space. USDA currently leases space in multiple office buildings throughout the Washington, D.C. metropolitan area, which costs us nearly \$30 million annually. Funds were provided by Congress in FY 1995 to begin construction of the Beltsville facility and design the South Building modernization plan. However, USDA placed these activities on hold in June 1995 to review the overall Strategic Space Plan and ensure that the Beltsville facility was consistent with USDA mission needs and our revised long-range personnel streamlining plans. Our review has confirmed that the Beltsville Office Facility strategy is the most cost-effective approach to housing USDA personnel permanently and

allowing us to vacate sufficient space in the South Building to repair and modernize this 60-year old building.

Question. Will the Farm Bill have any impact on these plans?

Answer. The Washington Strategic Space Plan is a flexible plan which allows USDA to adapt to constantly changing space needs for housing USDA personnel.

While it is not possible to predict exactly what USDA headquarters staffing needs will be in future years, our best estimates, considering implementation of the new Farm Bill, show that there will be a need for more than 9,900 staff in Washington, down from approximately 12,000 currently. These personnel will be housed, at the end of the construction and renovation program, at either the Beltsville Office Facility or the downtown Washington, D.C. headquarters complex (excluding the Cotton Annex).

In addition, we anticipate that the Farm Bill will include language which authorizes USDA to make the road improvements needed for the Beltsville Office Facility.

EMERGENCY DISASTER LOANS

Mr. Secretary, I notice in the budget, and you mention in your prepared statement, that the Administration proposes the elimination of Emergency Disaster Loans. The reason for this elimination is that most of the loans have been used for crop losses, which are now covered by crop insurance.

Question. In cases such as Mississippi last year, when farmers were under the impression that the catastrophic coverage was equal to previous disaster provisions, the Emergency Disaster Loans were the only additional source of assistance to these farmers. You state in your prepared statement that these farmers can receive assistance under the regular farm operating and ownership loan programs, but it is my understanding that these programs have significant application backlogs. What would happen to a farmer in this situation?

Answer. History has shown us that emergency disaster loans, are a costly method of assistance for affected producers. Costly, in the sense that, producers often have difficulty repaying these obligations. As of September 30, 1995, the Department had emergency loans of about \$4.8 billion in principal and interest outstanding, over 41 percent of this amount was delinquent. In Mississippi, nearly 64 percent of the \$462 million in principal and interest outstanding was delinquent. Producers are facing the prospect of losing their farms, not to disaster but, to the disaster assistance intended to help them. About 80 percent of the Nation's producers participate in the crop insurance program. More than half of the insured acreage is covered at higher levels than the base catastrophic coverage. I believe the crop insurance program, with the optional buy-up coverage, provides producers with relatively inexpensive up-front protection from losses. For crops that are not covered by the crop insurance program, the non-insured assistance payment program is available.

For producers who choose not to obtain sufficient coverage under the crop insurance program, and may require loan assistance, if they must rely on USDA for credit assistance, I suggest that consider guaranteed loan assistance. Particularly on the farm operating loan side, there has been more than enough budget authority to meet the demands for this program in recent years. Direct loans are, of course, in limited supply and targeted to beginning farmers among others.

Question. The Emergency Disaster Loan program is a direct loan program. However, the President's budget proposes cuts of 32% and 23% in direct farm ownership and direct farm operating loans,

respectfully. How can you absorb these cuts while adding the burden of emergency disaster loans to these programs?

Answer. As I indicated in my prior response, we expect the crop insurance program with the optional buy-up protection to alleviate much of the need for emergency disaster loans. In those cases where a farm program loan is necessary, I suggest that guaranteed loans be the primary source of such assistance.

NATIONAL PERFORMANCE REVIEW

Question. Mr. Secretary, yesterday's *Washington Post* included an article on the pilot sites or "reinvention labs" that were selected to develop and test new approaches to improving agency performance as a result of the Vice President's national performance review. According to the article, USDA has 12 of these laboratories. What agencies of the Department are involved in these laboratories?

Answer. Mr. Cochran, we have pilot projects going on in the Animal and Plant Health Inspection Service (APHIS), Extension Service, Foreign Agricultural Service (FAS), and Departmental Administration Office of Operations.

Question. Mr. Secretary, the article highlights that some agencies have had to seek waivers from their established regulations in order to implement these "labs." Have the agencies of the Department that have been involved in the program sought waivers for their activities?

Answer. Mr. Cochran, none of the agencies have sought waivers for the pilots.

Question. How much has the Department's participation in this exercise cost, and what, if any, savings were realized? Where are these savings reflected in the budget?

Answer. Mr. Cochran, the USDA reinvention labs primarily deal with improvements to administrative operations with the goal of providing services to our customers more efficiently. To date, the costs to USDA have been predominately for staff and related expenses to design and test these new ideas. For example, FAS set out to streamline its travel accounting process, APHIS set out to simplify rulemaking, and the Civil Rights operations office tested a Dispute Resolution Board designed to provide earlier resolution of new equal employment opportunity complaints. The IRM operations office is working on a system to automate records management in USDA. While we anticipate that these activities will result in more efficient services and therefore reduced program delivery costs, these savings are not reflected in any single line item in the budget. Rather, these activities have helped the Department to better absorb the reductions in the budget for administrative activities in recent years.

INFOSHARE AND FIELD OFFICE SERVICE CENTERS

This Committee provided \$7.5 million for the InfoShare program and noted that USDA was in the process of reevaluating the program. USDA then disbanded this program at the end of 1995. USDA's FY 1997 Budget Summary notes that activities which were formerly InfoShare have been incorporated under USDA's Service Center implementation initiative.

Question. How will the implementation of the new Farm Bill affect this initiative?

Answer. We anticipate that the Farm Bill will certainly affect the final implementation of this initiative. Although we have already begun to review the possible outcomes, it is too early to be specific about Farm bill impacts.

Once the Farm Bill is passed, the Department will evaluate

the challenges it presents, the budget constraints of the current fiscal year and projected for FY 1997, and the restructuring of the Rural Economic and Community Development Mission Area. We will evaluate our business under these new circumstances and, if necessary, realign our Service Center field structure with that new business.

INFOSHARE AND FIELD OFFICE SERVICE CENTERS

Question. What findings in USDA's evaluation led to the decision of disbanding the InfoShare Program?

Answer. The partner agencies involved in the former InfoShare program had long believed that the activities which were once led by the headquarters-level InfoShare Program Office would be better operated by the agencies themselves. Led by the agencies, this project would have closer ties to program missions and business operations. USDA has worked hard to empower its employees to help reduce excess layers of management; here, a group of program agencies joined together to eliminate the need for a headquarters-level program staff. Therefore, all operational activities of the program are now under the authority of the partner agencies -- the program folks who know our customers and their needs -- and the responsibility for technical oversight has been delegated to the Assistant Secretary for Administration.

Question. What specific InfoShare activities were incorporated under USDA's Service Center implementation initiative and what is being done to carry out these activities?

Answer. All operational and planning activities were incorporated under the USDA Service Center Implementation Team. The Deputy Secretary is overseeing this project along with the subcabinet officials for the involved agencies and has charged the National Food and Agriculture Council (FAC) with implementing the reorganization of USDA's field structure including InfoShare activities. The National FAC is comprised of the Administrator of the Farm Service Agency, the Chief of the Natural Resources Conservation Service (NRCS), and the Administrator of the Rural Housing Service (RHS). The Administrator of RHS is the current Chair and also represents the Rural Development area. The Assistant Secretary for Administration is an ex-officio member to provide Departmental oversight. The National FAC is staffed by an Executive Officer and a small interagency Service Center Implementation Team (SCIT). SCIT coordinates the collective resources of the partner agencies which are devoted to the implementation initiative.

In addition, we will provide for the record a list of the pilot projects that have been continued. (The information follows:)

A. Sites established by Easy Access (1992)

The Easy Access project established a number of pilot sites, of which three continue to function as pilots:

1. Sherman County (Goodland), KS and Bolivar County (Cleveland), MS, are pilots for a single shared database for the service center. The database extracts a fixed set of data from agency legacy systems; this information can be accessed directly by customers.
2. Rockingham County (Harrisonburg), VA, is a GIS pilot.

B. Sites established/used by InfoShare (1993-1995)

1. Two additional GIS pilots sites were established in Osage County (Lyndon), KS, and Morgan County (Fort Morgan), CO. These sites continue to function, with the Harrisonburg, VA, office as GIS pilots. The work is facilitated by Natural Resources Conservation Service and supported by information specialists in the partner

agencies. In addition, the Osage County office is being used to validate information requirements for the telecommunications project.

2. A test laboratory was established in the State of Kentucky, consisting of 13 county offices and the State Office. The Service Center Implementation Team is focusing on multi-agency reengineered business processes and will continue to use the Kentucky sites as a test laboratory. The Customer Information Profile, a shared database of customer information, is scheduled for testing in Kentucky (as well as in Osage County, KS).
3. During calendar year 1995, the LAN/WAN/Voice Team of InfoShare established Benefit Assessment Sites in Alabama and Oregon. The LAN/WAN/VOICE team is charged with providing voice and data communications, including: the installation of common integrated telephones, wiring interconnectivity of existing computers, long distance learning capability, and wide area networking for USDA service centers to enable customers to transact business with one phone call and enable USDA employees to share data, technology and information.

Question. What former InfoShare activities remain separate from the Service Center Implementation effort and are still under the Assistant Secretary for Administration's direction? What is being done to carry out these activities, and what has been accomplished to date?

Answer. The Agency Administrators of the partner agencies are responsible for the Service Center Implementation effort, and as such are responsible for the operations of the former InfoShare activities. Now that the transition is complete, the role for Departmental Administration is to provide oversight and technical assistance as needed.

In order to carry out these activities, a senior policy advisor position has been established, within the immediate office of the Assistant Secretary for Administration. A team has been established to provide department-level expertise in training, procurement, and information resources management.

Question. Provide a detailed explanation of how the Department plans to spend the \$7.5 million the Committee appropriated for the InfoShare Program in FY 1996. Also, please provide a similar breakdown of how the Department proposes to spend the \$7.5 million for FY 1997.

Answer. The Service Center Implementation Team (SCIT) in concert with the interagency working teams, and in order to effect the full integration of the InfoShare component into Service Center implementation, developed recommendations for the most effective use of the InfoShare appropriation in support of Business Process Reengineering and Business Process Improvements (BPR/BPI). These recommendations were considered over the course of National FAC meetings in February and March. The recommended budget was approved by the National FAC and has been submitted to the Deputy Secretary for review.

We plan to use the FY 1996 InfoShare appropriation of \$7.5 million to support the overall effort to evaluate and reengineer the way we do business in an effort to provide improved customer service by the partner agencies at reduced costs. Specifically, our plans include the following activities:

- \$3.945 million for agency identified BPR/BPI projects which will be managed and staffed by agency employees and other related pilot efforts. The BPR projects will utilize established methodology including a process design phase and prototype and evaluation phase;

- \$1 million for building staff/customer support and buy-in by providing Service Center staff training in change management, teambuilding and customer service, establishing Employee Association and Union Coordination Councils, using customer service focus groups and other initiatives;
- \$600,000 for further development of the Kentucky Automation Laboratory to provide a pilot site for future testing of possible BPR solutions;
- \$500,000 for the development of a standard telecommunications architecture;
- \$750,000 for the closeout and transition of InfoShare activities; and finally,
- \$705,000 for operations oversight and technical assistance activities in the Office of the Assistant Secretary for Administration and administrative staff support for SCIT.

In FY 1997, the \$7.5 million will be used for further development of existing BPR/BPI projects and the identification of new processes for evaluation; telecommunications activities; continued training for Service Center staff and some staff support for SCIT. All of these efforts in support of BPR/BPI are ongoing activities which will ultimately provide the basis for justifying any future investment in information technology.

It is my understanding that the Department entered into an agreement with the Vermont Center for Geographical Information under which \$50,000 of funds appropriated to the InfoShare program were allocated.

Question. How does geographic information fit into the InfoShare/Service Center Implementation initiative?

Answer. Geographic Information Systems (GIS) are projected to be substantially beneficial to USDA customers as the business processes infrastructure and data available to service centers are upgraded nationwide over the long term. Agencies represented in service centers believe the development, assessment, packaging, and dissemination of geographically referenced natural resource and related social/economic information are important components to USDA's mission.

Much of the data collected within field offices is related to a specific location on the land. We believe field staff would be more efficient by automating many "manually" conducted current processes within a Geographic Information System. For example, the location of fields designated as highly erodible land can be compared with the locations of streams under GIS. Criteria for Conservation Reserve Program (CRP) eligibility could be evaluated against known crop history information and previously identified eroding areas within watersheds. Wetlands could be inventoried. Geographic information fits within the Service Center Initiative because it will allow agencies to better share data and save producers time.

However, it is anticipated that the Farm Bill will result in changes to several major Farm Service Agency (FSA) program functions that would have greatly benefitted from use of digital orthophoto quadrangles and related farm, field, crop, and producer information. Agencies such as FSA will need to ensure that benefits envisioned will continue to be justifiable as provisions of the Farm Bill are implemented.

Concerning an agreement with Vermont, it is my understanding that last fall the InfoShare Program staff identified a potentially beneficial pilot opportunity involving the Vermont Center for Geographic Information. A letter, which incorrectly identified this project as a grant, was written and funds were identified and set

aside pending further negotiations with the State of Vermont. To date, no funds have been expended or transferred outside of USDA. The Service Center Implementation Team is evaluating whether there is a need for this type of pilot.

Question. Are there other sources of funds appropriated to the Department for geographic information?

Answer. While there are no funds directly appropriated to any USDA office specifically for Geographic Information Systems (GIS) or geographic information technology, funds used for GIS do come from the Natural Resources Conservation Service and the Farm Service Agency. The Forest Service is also involved in GIS activities.

Question. Were there other grants or similar arrangements which were funded with the funds appropriated for InfoShare? To whom, for what purpose and for how much?

Answer. There were no grants or other such agreements or similar arrangements funded using the funds appropriated for InfoShare.

USDA TECHNOLOGY ACQUISITIONS

This Committee last year provided several expectations relating to reengineering business processes, addressing other oversight concerns, and implementing a Department-wide information systems technology architecture. Each of these were to be completed prior to USDA acquiring new technology.

Question. What progress has USDA made to reengineer business processes and what milestones exist for completing this very important effort?

Answer. According to the Service Center Implementation Team, representatives from the partner agencies, supported by a contractor, with expertise in proven reengineering methodology, completed the development of a list of business processes that are common to the partner agencies. This project team gathered information from previous USDA initiatives, conducted working sessions with field personnel in Illinois and South Carolina, and met with customers in both States to hear their views first hand. The team identified and recorded over 150 processes, activities and tasks during the project's data collection phase. During the assessment phase, the team sorted and reordered the list into a hierarchy of fourteen processes that are common to Service Center partner agencies. These fall into three main project areas:

- Information and Outreach,
- Deliver and Service Customer Benefits, and
- Management and Support.

Each of the project groupings is being managed by a Deputy Administrator/Chief representing each mission area and staffed by partner agency personnel with support from consulting services. Any needed software development and piloting costs are proposed to be supported from FY 1996 InfoShare funds and future appropriations. Specific project plans, including resource needs, timetables and milestones are now in development with some further along than others. Some of the plans may have to be altered depending on the outcome of the Farm Bill.

BPR will provide the basis for justifying any future investment in technology.

Question. What progress has USDA made to address other oversight concerns, such as establishing a usable project management system to track project activities and a comprehensive budget tracking and accounting system to identify and report agency expenditures?

Answer. The Service Center Implementation Team (SCIT) has initiated the use of a project management system. SCIT is working with the partner Agency budget offices to develop a comprehensive budget tracking and accounting system to identify and report agency expenditures.

In addition, our IRM office is developing a project management training program to provide project managers capable of successfully completing large projects through application of sound business practices. Through this program, USDA will develop a cadre of certified project managers across the Department. We will institutionalize project management through training, cross-organizational teams, and departmental policies, standards and guidelines. The result will be increased project success and more efficient use of scarce resources.

Question. To what extent has USDA examined and implemented a Department-wide information systems technology architecture and if it is not yet implemented, when does USDA expect to accomplish this?

Answer. USDA welcomes the opportunity to address the issue of developing an information architecture for the Department. In the fall of 1995, I commissioned a team of senior-level IRM managers to analyze the management of the Department's information resources and make recommendations for improvement. One of the highest priority items identified by the team was the development of a Department-wide framework, or architecture to guide the integration of existing and planned information systems. Since then, considerable progress has been made to develop an architecture that will lead the Department to more consistency, interoperability, economy of scale, and ultimately, to optimized operating costs.

The key components of the USDA architecture are: (1) a Telecommunications Network Architecture, which is scheduled to be completed in the first quarter of fiscal year 1997; (2) a Technical Architecture for hardware and software standards, which is also scheduled to be completed in the first quarter of fiscal year 1997; and, (3) a Business/Data Architecture with estimated completion in the fourth quarter of fiscal year 1997.

We recognize that the development of an information architecture must evolve, subject to continuous review and revision. Our strategy is to focus on major items early and work to increase the levels of detail and specificity as needed. Depending on the availability of funds and other resources, USDA should be well positioned to clearly describe its long-term information infrastructure upon completion of its architecture work. However, it must be noted that in order to provide uninterrupted service to our customers, and to address new legislative requirements, incremental system development will need to continue prior to completion of our architecture work.

Question. What did USDA spend in FY 1995 and the first quarter of FY 1996 on technology acquisitions, and what does USDA expect to spend the remaining three quarters of FY 1996 on technology acquisitions, especially from the nearly \$100 million in CCC funds which the Department at one time planned to spend in FY 1996 and what specifically will be acquired?

Answer. The Department collects annual, not quarterly, acquisition data from the agencies. I will provide for the record a table showing the amounts spent in FY 1995 and planned for FY 1996.

[The information follows:]

USDA Technology Acquisitions
(in millions of dollars)

<u>CATEGORY</u>	<u>FY 1995</u>	<u>FY 1996</u>
Equipment	\$ 228	\$ 281
Software	53	69
Services		
(includes data communications)	43	54
Support Services (systems analysis, programming/design, studies)	157	247
Supplies	19	21
Personnel (compensation/benefits)	313	304
Other (capital purchases)	0	0
Intra-Governmental Payments	410	418
Intra-Governmental Collections	<u>(112)</u>	<u>(123)</u>
Total Obligations	\$1,111	\$1,271

The Farm Service Agency plans to spend \$84.1 million on technology acquisitions in fiscal year 1996 using CCC funds. A major component of these expenditures will support implementation of voice and data infrastructures for USDA Service Centers.

Question. For any acquisitions USDA made in FY 1995 and makes in FY 1996 prior to completing the expectations set by this Committee -- What acquisitions are these and what specific circumstances existed or will exist that requires the Department to make the acquisition prior to completing Reengineering, addressing oversight concerns, and developing a Department-wide architecture.

Answer. Rural Economic and Community Development acquired hardware and software for the new Dedicated Loan Origination and Servicing (DLOS) System during FY 1995 and FY 1996. These acquisitions were coordinated through the Department and the Service Center agencies to ensure consistency with other Service Center agency needs and Departmental direction.

The Farm Service Agency purchased System 36 upgrades in FY 1995, and the Natural Resource Conservation Service purchased Field Office Computing (FOCS) upgrades in FY 1996 to insure continuous delivery of program services while SCIT is completing reengineering. Oversight concerns were addressed by obtaining approval from General Services Administration for this acquisition.

Besides the above acquisitions made by the Service Center agencies, USDA awarded the following two major acquisitions for information technology in FY 1995: (1) the Integrated Systems Acquisition Project (ISAP) for the Animal and Plant Health Inspection Service, and (2) Project 615 for the Forest Service. Both contracts are available to all USDA agencies and offer various IBM hardware as well as off-the-shelf software.

Both ISAP and Project 615 acquisitions met the existing Departmental technical standards and were based on open system concepts and interoperability standards, allowing future migration to a Department-wide architecture with data sharing and enterprise interoperability. In addition, the computer, telecommunications and software available on these contracts is compatible with future plans of the USDA Service Center Implementation Team for the replacement of legacy systems. Finally, Project 615 was started several years ago to replace aging Data General Systems and to meet mission needs for Geographic Information Systems. Oversight issues from the General Accounting Office were addressed.

USDA SERVICE CENTER IMPLEMENTATION

USDA's FY 1997 Budget Summary notes that USDA is implementing "one-stop" Service Centers and that the cost to do this will be paid for out of the agencies individual budgets.

Question. What are the total expected costs for implementing "one-stop" Service Centers, broken out by each fiscal year and by agency?

Answer. That information follows:

USDA Service Center Implementation

Activity	FY 1995	FY 1996	FY 1997
(estimate)		(estimate)	
County Office Consolidations	\$14,900	\$22,100	\$25,200
FSA	5,700	11,400	7,600
NRCS	1,000	2,000	5,600
RECD	8,200	8,700	12,000
Change Management & BPR	\$14,200	\$7,500	\$7,500
FSA	3,200	---	---
NRCS	3,200	---	---
RECD	7,800	---	---
OSEC (InfoShare Appropriation)		7,500	7,500
Information Resource Initiatives	\$11,200	\$127,200	\$126,700
CCC	1,600	74,300	77,400
FSA	---	1,900	1,700
NRCS	1,900	35,400	34,700
RECD	7,700	15,600	12,900
TOTAL	\$40,300	\$156,800	\$159,400

Funding Source

Appropriation to OSEC	---	7,500	7,500
CCC	1,600	74,300	77,400
FSA	8,900	13,300	9,300
NRCS	6,100	37,400	40,300
RECD	23,700	24,300	24,900
TOTAL	\$40,300	\$156,800	\$159,400

Question. How much is USDA requesting in FY 1997 under each of the agency budgets, including CCC funds to implement new Service Centers?

Answer. The Agency Budgets do not identify a specific line item for Service Center implementation; however certain line items are directly associated with this effort. The following is a breakdown of the agency budget components directly associated with Service Center Implementation:

Commodity Credit Corporation

\$77,400,000 -- Funds will be used for portions of: integrated phone systems; placement of routers establishing the telecommunications infrastructure; base data acquisitions; and other IRM efforts to enhance data sharing/support; pilot Business Process reengineering (BPR) and Business Process Improvements (BPI) outcomes; test video satellite communications for training; and develop business needs, cost assessments and justifications for future automation needs.

Farm Service Agency

\$7,600,000 -- For office consolidations. To provide for additional space and renovations associated with establishment of service centers and consolidations.

\$1,700,000 -- For FSA non CCC funded integrated voice systems.

Natural Resources Conservation Service

\$5,600,000 -- For costs NRCS has projected site by site to relocate/close field offices.

\$34,700 -- For information technology for NRCS portion of LAN/WAN/Voice systems and Geographic Information systems.

Rural Economic and Community Development

\$12,000,000 -- For office moves, closures and consolidations.

\$12,900,000 -- For telecommunications and modern computer infrastructure to support consolidated field offices.

USDA's FY 1997 Budget Summary indicates that the Service Center implementation initiative will provide streamlined business processes, an integrated phone system and a common computing environment which will support efficient program delivery at a lower cost to the taxpayer.

Question. When is each of the above expected to be completed?

Answer. The Department is planning to have integrated phone and data systems in place in all field offices by December 1997.

As I mentioned earlier, a process is in place to conduct BPR and these efforts will provide the basis for justifying any future investment in technology, probably in Fiscal Year 1998.

Question. What specific efficiencies and cost savings are expected?

Answer. Our primary objective in the development of the field office consolidation plan is to deliver programs and services in the most efficient and cost effective manner while improving the quality of services to the public. Our goal is that USDA Service Centers, in partnership with people and communities, will deliver agricultural, rural development, and natural resource programs with a continuity and quality of service that exceeds customers' expectations, and also achieves maximum efficiency at one location.

We anticipate that there will be significant cost savings achieved through collocation of offices and sharing of human and other resources across agencies. Reductions in administrative and program delivery costs to USDA and the public will be achieved by implementing common business processes in support of one stop service.

GEOGRAPHICAL INFORMATION SYSTEMS TECHNOLOGIES

1. Last year, this Committee noted the growth in geographical information systems (GIS) technologies and their application in the public sector. In this regard, the Committee encouraged that the Secretary to pursue the possibility of a multi-agency, multi-disciplinary approach to better involve federal, state, and local governments in developing uniform GIS applications.

Question. What progress has USDA made to establish a multi-agency and multi-disciplinary approach to develop uniform GIS applications?

Answer. All GIS activities are coordinated within USDA at several levels. First, data development and integration activities are coordinated within the Agriculture Geographic Data Committee (AGDC). The Forest Service, NRCS, and FSA are active participants. This committee also provides a coordinated voice for agriculture within the Federal Geographic Data Committee (FGDC). The Forest Service, FSA and NRCS are all active members on sub-committees within FGDC.

USDA has piloted geoprocessing activities in designated sites under the Easy Access, InfoShare, and Service Center Implementation programs. The primary activities piloted include streamlining field office operations through the use of geographical information systems (GIS) technology and sharing a common GIS database between agencies. Much of the information collected at the service center level is related to spatial characteristics of the land. Geospatial databases such as fields or land units digitized to fit to digital orthophotography are maintained jointly between service center agencies within these pilot sites. Other geospatial databases such as soils and crop history are shared but managed by each agency.

Piloted geospatially based software applications include conservation planning, soil evaluations, and technical assistance done by NRCS, and crop or acreage reporting done by FSA. For example, data analysis and information from the GIS is provided to customers that are interpreted for the specific questions they are asking and for their specific area of interest. Customers receive this information in the form of computer generated maps or computer readable data. Software is being piloted that makes the developing databases easier such as digitizing wetlands "on screen" off the digital orthophotography image on the computer. Pilot site staff have taken considerable personal initiative to share resources, plan new initiatives, and work closely sharing data and resources with state and county government entities.

Forest Service (FS) and NRCS have been working together to develop critical geographically referenced natural resource databases to support ecosystem management and ecosystem based planning activities. Applications involving digital orthophotography, elevation, plants, climate, and statistically sampled natural resources data have been jointly developed and coordinated to gain efficiency.

The FS, NRCS, ARS and other USDA agencies, work closely with many of the State agencies involved with GIS technology. These agencies have cooperative agreements with most of the State GIS and Natural Resource Agencies and are involved with collaborative GIS projects. In addition, the FS has been working with the Bureau of Land Management and the Department of Interior to establish compatible systems.

Finally, FS, FSA, NRCS, National Agricultural Statistics Service, and a few other USDA agencies are involved with the Federal Geographic Data Committee, which coordinates many aspects of GIS technology. One of FGDC's initiatives is to work with industry to help standardize GIS application software development through a more open systems approach, the open GIS (OGIS) Consortium. Guidelines have been drafted and issued by OGIS and a draft standard specification is expected in 1997.

Question. What steps has USDA taken to ensure that activities related to developing GIS are not duplicated across government agencies and are systematically accomplished?

Answer. Agencies within USDA, in cooperation with the U.S. Geological Survey (USGS), have been pursuing the development of digital orthophoto quadrangles (DOQs). The common objective among the cooperating organizations is to provide the fundamental mapping components needed to build a nation-wide database of geographical information. Once available, the information can be used to greatly improve the timeliness and accuracy of program delivery functions by USDA as well as support a wide variety of other Federal, State and local interests.

All land management agencies, including the Forest Service (FS), are currently working to identify and document their spatial data and make it available electronically through the National Spatial Data Infrastructure (NSDI). The NSDI, established in 1994 by Executive Order 12906, provides a clearing house, metadata

standards, and support for partnering to facilitate exchange of geospatial, or geographically referenced data. Development of the NSDI is overseen by the Federal Geographical Data Committee (FGDC).

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NRCS, RECD, and FSA are coordinating GIS activities within the Service Center Initiative. Activities coordinated include the geospatial applications mentioned above, geodata acquisition, and IT architecture planning in support of geoprocessing.

Further, NRCS has formed a team to develop an integrated Agency Data Management Plan. This plan will contain the explicit data requirements for at least three mission areas of the agency, 1) field and community/watershed based conservation planning, 2) regional and national level resource assessment and policy analysis, and 3) agency management and performance measurement. The plan will also contain the funding, staffing, and infrastructure necessary to collect and manage this information. Current NRCS policy states "NRCS shall acquire existing geographic databases rather than develop the data whenever it meets the geospatial analysis needs, NRCS quality digitizing standards, and is cost effective". Additionally, NRCS will be issuing policy within two months regarding the implementation of Executive Order 12906 on Coordinating Geographic Data Acquisition and Access in support of the National Spatial Data Infrastructure.

Question. What has USDA's farm service, conservation, and rural development agencies spent over each of the last 5 years on GIS technologies and related expenditures? (Please list by fiscal year by agency)

Answer. The information follows:

NRCS Geodata Expenditures:

<u>Year</u>	<u>Soils</u>	<u>Orthoimagery</u>
1996	\$7,000,000	\$5,200,000
1995	5,000,000	6,000,000
1994	500,000	3,000,000
1993	250,000	500,000
1992	200,000	300,000

GIS investments exclusive of data acquisition have not been tracked separately but are fully integrated within NRCS application information systems. NRCS does not have a separate budget line item for GIS or for IRM as these costs are part of the program delivery budgets.

Farm Service Agency:
(CCC Funded)

<u>Year</u>	<u>DOQ*</u>	<u>GIS InfoShare</u>
1996	\$12,000,000	---
1995	925,000	\$732,000

* DOQs - Digital Orthophoto Quadrangles

Forest Service:

<u>Year</u>	<u>Hardware</u>	<u>Software</u>
1994	\$1,957,000	\$288,000
1993	2,980,000	589,000
1992	1,500,000	450,000

For fiscal years 1995 and 1996, GIS technologies and related expenditures are part of the acquisition cost for hardware and software obtained from the FS contract with IBM. Most of the hardware is multipurpose and is not dedicated to only GIS or other uses. Software on this contract is part of a single price bundle, as with hardware, and GIS is not a separate component of the costs. However, using gross estimates based on the type of work performed during the pilot, about 60 percent of the investment supports GIS related work. This gross percentage is likely to remain applicable for FY 1996 and FY 1997.

Total spending on this contract for both GIS and other uses in FY 1995 was \$43.7 million for hardware and \$10 million for software. Expenditures in FY 1996 have been about \$10 million for software. The FS is planning on spending up to \$30 million for hardware this fiscal year; however, to date, less than \$10,000 has been obligated. This limited level of spending is because the FS is conducting a 12-month pilot test, and full implementation will not begin until the pilot is completed in August 1996.

Question. How much is USDA planning to spend in FY 1997 on GIS technologies and related expenditures?

Answer. NRCS plans to spend \$20 million on geodata acquisition. Of the \$20 million requested, NRCS will use \$5 million to cost share with federal, state, and local units of government to purchase digital orthophotography from the private sector. The remaining \$15 will be used by NRCS to re-compile the older soils information onto the new digital orthophotography and convert soils information from paper copy to digital form.

NRCS plans to spend an additional \$1.5 million on application development that will integrate geoprocessing capability into the existing Field Office Computing System (FOCS). The applications developed for existing systems will be compatible with any future platform. The Service Center Voice/Data initiative is an important enabling task for the successful implementation of this application.

NRCS plans to continue to support geospatial applications within field offices with regular and continuous IT upgrades as needs arise and industry advancements are made in coordination with the Service Center Initiative. These IT expenditures have not been separated by what supports geoprocessing and what does not. NRCS is planning to fund these activities though the regular appropriations process for the agency.

The Farm Service Agency has budgeted CCC funds at the rate of \$12 million starting in FY 1996 for a period of five years for the development of Digital Orthophoto Quadrangles (DOQs) under the National Digital Orthophoto Program (NDOP) program. However, the commitment of these funds have been delayed until an analysis of the Farm Bill impacts on program functions that would have benefitted from the use of DOQs and GIS is completed. Further funding caps and limitations on reimbursements to other federal agencies may impact FSA participation in this program.

The Forest Service plans to obtain GIS hardware and software from a contract with IBM. These systems serve both GIS and office automation users. Software on this contract is part of a single price bundle, as with hardware, and GIS is not a separate component of these costs. In FY 1997, the FS plans to bring approximately 7,000 users online throughout the agency in accordance with the

guidelines presented to Congress in the pilot report. This is estimated to require expenditures in the range of \$60 million. GIS will account for about 60 percent of the total.

Question. How much is USDA planning to spend in FY 1997 on GIS technologies and related expenditures and how is the department planning to fund these activities?

Answer. These expenditures were discussed in the answer to the previous question.

Question. What are the life-cycle costs anticipated for establishing GIS technologies at USDA for the farm service, conservation, and rural development agencies?

Answer. The Farm Service Agency projects the need for CCC funds at the rate of \$12 million starting in FY 1996 for a period of five years for the development of Digital Orthophoto Quadrangles (DOQs) under the National Digital Orthophoto Program (NDOP) program.

Based on previous studies, the GIS life-cycle management cost estimates for the Forest Service are:

Hardware	\$103,759,000
Software	30,000,000
Hardware Maintenance	13,938,000
Training	9,683,000
Other Support	<u>6,340,000</u>
Total	\$163,720,000

Finally, based on the recent report entitled A Framework Plan Linking GIS Technology with FOCS and NRCS Business Activities, NRCS estimates the following needs for geodata acquisition to support its programs.

Year	Soils	Orthoimagery
1998	\$15,000,000	\$12,000,000
1999	15,000,000	12,000,000
2000	15,000,000	12,000,000
2001	15,000,000	6,000,000
2002	10,000,000	6,000,000
2003	5,000,000	6,000,000
2004	3,000,000	6,000,000
2005	3,000,000	6,000,000

MODERNIZATION OF ADMINISTRATIVE PROCESSES (MAP)

1. During the realignment of management activities under the Department's reorganization, mission areas consolidated headquarters management functions to provide more efficient administrative services in support of Department programs. Besides providing more efficient administrative services through consolidation, USDA's budget documents show that it has been undertaking another effort to achieve administrative efficiencies -- called Modernization of Administrative Processes (MAP).

Question. How much has USDA spent through FY 1995 on MAP?

Answer. The MAP Program Office spent about \$1 million in fiscal year 1994, and about \$2.7 million in fiscal year 1995.

Question. What specific accomplishments -- in terms of reengineering administrative processes, achieving efficiencies, and reducing costs -- has USDA made through the end of FY 1995 with the MAP program?

Answer. In FY 1995, a MAP team completed a business case analysis on how to reengineer the purchase card and third party draft processes. The team concluded that by implementing a new reconciliation system and cutting redundant levels of review, the National Finance Center -- NFC -- systems costs associated with current administrative payment systems could be reduced by \$5.7 million cumulative over 5 years. Overall, the new process has the potential for achieving up to \$45 million in administrative efficiencies and cost avoidances by the year 2000, while assisting the Department in meeting streamlining reductions already identified in budget projections. Such reductions have been highly commended by USDA and National Performance Review -- NPR -- leadership. The project was highlighted in the October, 1995 edition of the NPR's publication, "Reinvention Express." Also, as part of the team's strategy to identify "quick hits for improvements", they announced that one NFC administrative payment system would be eliminated immediately to avoid \$400,000 annually in systems costs. Further, a partnership has been forged with the General Services Administration on a related pilot -- the first such pilot in the federal government -- which will allow purchase card holders to write checks against a credit card account. If this is successful, GSA can offer the service to other agencies.

Question. How much does the department plan to spend on the MAP program in each of FY's 1996 and 1997?

Answer. The fiscal year 1996 operating allowance for the MAP program is \$4.2 million, and the fiscal year 1997 request is \$4.8 million. MAP is financed almost entirely through USDA's Working Capital Fund

Question. For funds USDA earmarked for the MAP program in FY 1996 and FY 1997, what administrative reengineering projects will the Department be working to complete, when are these expected to be completed, and what are the projected savings from these projects?

Answer. In fiscal years 1996 and 1997, MAP efforts will be directed in four major administrative business areas: Procurement, Human Resources, Information Resources Management -- IRM, and Property.

As discussed previously, a MAP team already completed a business case analysis of how to reengineer the purchase card and third party draft. The new automated reconciliation and payment system is known as the Purchase Card Management System -- PCMS. Currently, there are approximately 9,200 credit cards in use throughout USDA. This is expected to reach approximately 13,000 by fiscal year 1997 and 20,000 by fiscal year 2000. User tests of MAP's new PCMS are planned with the Forest Service and Agricultural Research Service and scheduled to be completed in the first quarter of fiscal year 1997. Full deployment throughout USDA should be completed by fiscal year 1998. In addition to USDA pilot agencies, an increasing number of non-USDA agencies are expressing interest in participating in this effort. MAP also continues to monitor the smart card technology with the intention that this will ultimately make it possible for card holders to have one card only, and thus expand further the efficiencies and savings to be achieved in MAP's reengineering effort.

MAP's ongoing Procurement Systems Modernization Project -- PSMP -- is conducting a detailed business analysis emphasizing the redesign, streamlining, and consolidation of USDA's acquisition processes. Process improvements identified by the PSMP team will be forwarded to USDA's Procurement Executive for evaluation and implementation. Projected cost savings from these process improvements will be identified in the cost benefit analysis planned for completion by the end of fiscal year 1996. By early fiscal year 1997, the team will make a "build or buy" determination for developing a new acquisition system. To ensure that the new USDA acquisition system represents the best in both Government and

industry, the PSMP team is now bench marking other federal agencies and private industry systems.

In the human resources business area, MAP is now reengineering the time and attendance process. Major changes are being envisioned for this process both by Vice President Gore's National Performance Review and the GAO. The preliminary Time and Attendance Business Case, to include a cost-benefit analysis, will be completed by September, 1996. User testing of the reengineered time and attendance system is expected to begin in early fiscal year 1997. MAP is also gearing up to launch a business analysis of other activities in USDA's human resources arena. Improving the way USDA conducts its human resources business is critical in order to address the FTE reduction and streamlining goals identified by the NPR.

In the telecommunications business area, a MAP team is now analyzing telecommunications activities as they relate to both services and equipment. It is anticipated that included in the scope of these initiatives will be the following activities as they pertain to telecommunications: acquisition; ordering; invoicing; payment; inventory control; property disposal; accounting; and management reporting. It is anticipated that at least three major processes associated with telecommunications will be reengineered, piloted and implemented at initial sites throughout USDA, beginning in fiscal year 1996.

Overall, by the close of fiscal year 1997, it is expected that MAP will have redesigned approximately nine administrative business processes. It is anticipated that these MAP business modernization initiatives will result in comparable savings and cost avoidances as projected in MAP's purchase card and third party draft project. In each project, a list of performance measures will be developed against which success can be gauged.

Each MAP project follows a strict project management discipline in order to ensure that it is kept on schedule, within budget and well integrated.

Question. How are MAP projects being coordinated across the Department to ensure that agencies implement the results of promising projects that will offer savings and ensure that agencies are not working to reengineer the same processes?

Answer. MAP is staffed heavily by detailees from USDA agencies to carry out its mission. This policy ensures that customer needs are consistently met and that MAP initiatives are shared as individuals return to their home agencies after completing their MAP detail and bring with them knowledge about new Departmental administrative processes and systems. MAP also relies on its customers, USDA agencies, to conduct user testing of each of MAP's business modernization efforts.

The MAP Management Review Board is another mechanism used by MAP to coordinate projects across USDA and ensure that implementation is occurring and that duplication is being avoided. In these semi-annual sessions organized by MAP, chaired by the Assistant Secretary for Administration and co-chaired by the Chief Financial Officer, senior executives and managers of each USDA mission area determine MAP priorities and resolve high level Departmental administrative issues.

In fiscal year 1996 MAP is sponsoring several round table working sessions for those involved in administrative modernization activities from throughout USDA to exchange information on the status of projects as well as on lessons learned. Attendees include business modernization initiative managers and team members; human resource and organizational development specialists; and administrative and management professionals. Agenda items include the following: the scope of ongoing business modernization initiatives in USDA; best practices in the federal government and

private sector; methodologies for reengineering; and performance measurements.

TELECOMMUNICATIONS

1. In September 1995, GAO found that USDA paid thousands of dollars for telecommunications services for a USDA field office that closed over a year earlier. USDA reported in its FY 1997 Budget Summary that the Department has closed about 500 field locations since December 1994 for the farm service agencies and another 60 field office closures for several other USDA agencies with field structures.

Question. What specific actions has USDA taken to ensure that telecommunications services for the 560 field locations the Department reported it closed since December 1994 have terminated telecommunications services?

Answer. As the result of concerns in this area, the Department amended its Telecommunications Policy (DR3300-1) on March 20, 1996 and distributed it to all USDA agencies and staff offices. The policy addresses this specific issue of eliminating redundant or uneconomical services, especially in office closures, relocations or consolidations to ensure that all unneeded telecommunications services are terminated promptly and accounts are closed, and second, telecommunications equipment is properly accounted for and reused where it is practical and cost-beneficial. DR3300-1 established specific procedures to ensure that USDA agencies manage telecommunications services more efficiently.

Question. How is the Department verifying that it is not paying for services to locations it has closed?

Answer. Departmental Telecommunications Policy specialists have established procedures for the Department as a whole to verify that services are terminated whenever offices are closed or consolidated. In addition, the USDA Service Center Implementation Team -- SCIT -- has developed and implemented specific procedures, in the form of a "checklist", for use in closing of field offices to establish USDA Service Centers. SCIT telecommunications specialists also conduct followup inquiries to make sure that USDA is not paying for unneeded services.

2. USDA also reported in its FY 1997 Budget Summary that the Department's Federal employment will be reduced by over 13,200. In light of this reduction of staff, we assume that most of these employees used telecommunications equipment and other information technology, such as computers.

Question. What analysis has the Department done to identify the surplus of equipment that should exist with the reduction in staff and what does this analysis show?

Answer. My staff has conducted a detailed analysis on information technology equipment utilization effects of streamlining and field office closure. In general, most State Offices have personal computers to support office automation activities and employee timekeeping preparation. County offices generally do not have personal computers unless they were needed to support the Risk Management CAT program or for support of the cotton program. To date, 238 county offices with System/36 minicomputer equipment have closed; 114 additional county offices with System/36 equipment are scheduled to close by September, 1997. These office closings have and will continue to result in the surplus of System/36 computers. Similar analyses have been conducted for other agencies with significant closure activities.

Question. What is the Department doing to cost-effectively use such equipment and relocate it, where feasible, to other field offices or locations anywhere across the Department where there is a need for such equipment rather than purchasing new equipment?

Answer. The Department has an active policy of screening all excess equipment for reutilization throughout the department. If the equipment is obsolete and cannot be used within the department, it is listed with the GSA excess inventory. This is often the case with microcomputers. Our closure of field offices has, however, presented opportunities to reutilize some of the excess IBM System/36 and AT&T 3B2 minicomputers to maintain legacy systems. For example, NRCS has transferred 105 excess 3B2 minicomputer systems to help meet FSA needs. Office closures, combined with networking at the state level, have also provided additional 3B2 hardware in support of legacy systems. In lieu of purchasing new equipment, sufficient surplus System/36 equipment has been set aside for necessary upgrades in other field offices that are pending closure. These offices will utilize this older model equipment until these offices are closed. Equipment that is surplus, but not needed for upgrades has been made available to other government agencies. Funds for maintenance service are no longer being spent on this surplus equipment. In this manner, we are using available assets to reduce the cost of maintaining our legacy systems pending development of follow-on systems as a result of the Service Center Implementation Team initiative.

EXPORT PROMOTION AND FOREIGN MARKET DEVELOPMENT

Question. Mr. Secretary, you indicate in your prepared statement that the future growth in farm income is directly tied to our continued ability to compete and sell in the international marketplace. And, because the international marketplace remains highly competitive, it is critical that we maintain our commitment to export promotion and foreign market development efforts.

When you appeared before this Subcommittee last year, you indicated that the Department was undertaking a review of international programs to determine how they might be changed to reflect the post-Uruguay Round trading environment. In addition, the Department was planning to review its export subsidy and credit guarantee programs to see how they might be made more effective as the trade liberalization provisions of the Uruguay Round Agreement become effective. What were your findings and what actions were taken as a result of USDA's interagency review of these programs?

Answer. Last summer, USDA published an Advance Notice of Proposed Rulemaking on possible options to reform the export bonus programs. In response to this notice, we received 65 comments with strong industry preferences in favor of one or the other options. We are currently evaluating the feasibility of using a pre-announced bonus mechanism for grains and oilseeds, while simultaneously using a reformed bid review mechanism for dairy, eggs and poultry.

The review of the CCC export credit programs did not indicate a need for revisions in response to the Uruguay Round Agreement. However, the Department did recommend changes in these programs in our Blue Book proposals for the Farm Bill. These include a change in the domestic content provisions for commodities exported under the CCC export credit programs so that more high value and value-added commodities can be sold through the programs. Also, we recommended that the creditworthiness criteria for the GSM-103 intermediate-term export credit guarantee program be broadened so that the program can be more effectively targeted at emerging, growth markets. We are very pleased that Congress has included these provisions in the trade title of the new Farm Bill.

Question. What evidence have we seen so far that our major agricultural competitors have increased their efforts to take advantage of a more liberalized trading environment under the NAFTA and GATT agreements?

Answer. We have seen a number of initiatives in the European Union (EU) and other countries to position themselves to be more competitive in the new trading environment. For example, the EU is continuing to reform its support programs for commodities besides

grains and oilseeds in an effort to make them more cost effective and reduce the cost of their programs. The EU has also launched bilateral initiatives to establish closer trade ties in Latin America and Asia. In addition, the EU is discussing setting up its own "MPP" program to supplement the existing, very successful programs operated by individual member states. Australia and Canada are also reexamining their domestic support policies to enhance their export competitiveness. For example, Canada has eliminated its rail subsidies, which will lead to a more rational, competitive transportation sector.

USDA "GREENBOX" INITIATIVE

Question. The fiscal year 1997 budget proposes an increase of almost 10 percent over 1996 to enable the Foreign Agricultural Service to expand its trade and export promotion programs as part of the Administration's "greenbox" initiatives. How will the increased funding be utilized to enhance U.S. agriculture's ability to compete and expand its share of the international marketplace?

Answer. Our fiscal year 1997 "greenbox" proposal builds on the increased funding which was provided for FAS in the 1996 Agriculture Appropriations Act. Specifically, the budget proposes the following increases for FAS:

- \$4.2 million for the continued expansion of FAS overseas attaché and trade offices;
- \$4.0 million to increase the FAS contribution to the Foreign Market Development Cooperator Program;
- \$1.5 million to expand the Federal/State Market Improvement Program (FSMIP) to provide matching grants to State Departments of Agriculture to develop innovative marketing techniques for use in international markets;
- \$1.5 million for a new Distributor Development Program which is designed to develop marketing strategies for specific groups of agricultural products with a high market potential in fast-growing overseas markets; and
- \$0.3 million for additional staff for the Office of the General Sales Manager to administer the expanded level of supplier export credit guarantees.

We are proposing an increase of \$150 million in the level of supplier credit guarantees to be made available by CCC in 1997 to facilitate increased sales of processed and consumer-ready U.S. agricultural products. Although part of our "greenbox" initiative, this increase is separate from the FAS appropriations request.

Question. What is the total amount of funding requested for the "greenbox" initiatives for fiscal year 1997? How does this compare to the fiscal year 1996 level of funding for these initiatives?

Answer. The fiscal year 1997 budget includes total program level increases of \$265.5 million for "greenbox" initiatives, of which \$15.5 million is for discretionary programs and \$250 million is for mandatory programs. This compares to program level increases of \$195.2 million requested in the fiscal year 1996 budget, of which \$35.2 million was for discretionary programs and \$160.0 million was for mandatory programs. It is important to note that these are program level increases above fiscal year 1995 enacted levels; 1995 is the base year against which our "greenbox" increases are measured.

BENEFITS OF THE MARKET PROMOTION PROGRAM

Question. What have been the benefits of the Market Promotion Program, which has now been renamed the Market Access Program in the Farm Bill conference agreement, in expanding international exports for U.S. agricultural products?

Answer. We believe the MPP has been an important program for expanding U.S. agricultural products, particularly high value and value-added products. Our analysis supports this conclusion and, equally important, program participants have cited many cases of increased overseas sales which they attribute in large part to export promotions they have undertaken with MPP assistance.

Evaluating the effectiveness of MPP is not an easy task. Many factors affect exports, and they are different for bulk commodities and consumer-oriented products. A 1995 FAS study, *Evaluating the Effectiveness of the Market Promotion Program on High Value Agricultural Exports*, evaluated the effectiveness of MPP for increasing U.S. exports of value-added, products by examining changes in U.S. market share of these products. It concluded that the change in the value of the dollar was responsible for roughly 40 percent of the change in market share; the rest was due to export promotion. Based on this finding, the study estimated that, for every dollar invested in the MPP and its predecessor, the TEA, since 1986, the United States has exported \$16 worth of high value, consumer food products.

As part of the Department's implementation of the Government Performance and Results Act of 1993, FAS will undertake new efforts to measure the benefits of MPP. These efforts should assist in achieving even greater program effectiveness.

FOREIGN MARKET DEVELOPMENT COOPERATOR PROGRAM

Question. The budget proposes a \$4 million increase in funding for the Foreign Market Development Cooperator Program. The fiscal year 1996 appropriations act provided the \$2 million increase requested by the Administration and directed the Department to continue to use unspent balances to maintain funding for the program at the fiscal year 1995 level. Will the \$4 million increase requested for the program for fiscal year 1997 be sufficient to maintain the program at the fiscal year 1995 funding level?

Answer. Yes, with the use of the remaining carryover balances and the additional \$4 million requested in the budget, we will be able to maintain the program at the fiscal year 1995 level of \$34 million for one more year.

SUPPLEMENTAL FEEDING PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC): TRANSFER OF CARRYOVER FUNDS

Mr. Secretary, you indicate that consistent with the 1996 Appropriations Act, you are evaluating WIC carryover funds for transfer to the Rural Utilities Service. The budget assumes that \$36 million will be transferred in 1996, based on an anticipated WIC carryover of \$136 million. I understand the actual WIC carryover has not yet been determined.

Question. If the actual carryover is higher than the \$136 million now estimated, will the additional amount be transferred to the Rural Utilities Assistance Program?

Answer. No, at the present time we do not anticipate transferring more than what is assumed in the 1997 budget request.

Question. When will you know the actual WIC carryover amount?

Answer. FCS expects to know the final number in May.

Question. When do you expect the funds to be transferred and available for the Rural Utilities Assistance Program?

Answer. I have directed FCS to set in motion such actions as are necessary to complete this transfer as soon as possible and expect the funds to be available to the Rural Utilities Assistance Program in May.

Question. We expect the offices and agencies of the Department to live within the limitations of the enacted appropriations level. What directions or policies has the Department established to assure that offices maintain staffing and expense levels consistent with their funding limits, and not enhance these levels by detailing personnel from other Departmental offices or covering certain expenses from other program accounts?

Answer. We make every attempt to manage and operate the Department's programs with a minimal level of staffing and operating expenses. Given the wide diversity of the Department's programs, there are occasions when it is necessary to provide additional expertise to assist in program development and coordination. In these instances, we may make use of temporary details of staff to provide that assistance.

In past years, we have proposed consolidating funding for the subcabinet offices into the Office of the Secretary as a means to better manage resources in terms of providing emphasis where it is needed for program development, coordination and management. I also note that USDA appears to be alone among cabinet departments in having separate appropriation accounts for each Under and Assistant Secretary. This approach to funding these offices provides almost no flexibility in meeting temporary or changing workload demands.

INTEGRATED PEST MANAGEMENT INITIATIVE

The fiscal year 1997 budget requests increased resources to enable the Department to move forward on the Integrated Pest Management (IPM) Initiative.

Question. Would you please explain the importance of the Department's Integrated Pest Management (IPM) Initiative?

Answer. The U.S. Department of Agriculture's Integrated Pest Management (IPM) Initiative is important to America's farmers to insure the future profitability, sustainability, and competitiveness of U.S. Agriculture. This Initiative is based on pest management needs identified by farmers and other stakeholders through a comprehensive needs identification and priority setting process. Failure to address these issues will reduce the ability of U.S. farmers to be profitable and competitive in world markets. The Initiative combines existing and new resources of USDA and Land-Grant University programs into a single coordinated and cooperative effort with farmers, private consultants, and industry representatives to address important pest control problems and to achieve the national goal of IPM implementation on 75 percent of the nation's crop acres by the year 2000.

Pest control currently averages approximately 34 percent of a farmer's variable crop production costs and pests continue to cause losses estimated at 10 to 30 percent to farmers using current pest control strategies. In addition to existing pests, farmers are continually challenged by new pests such as Karnal bunt, potato late blight, sweetpotato whitefly, and the brown citrus aphid and the associated citrus tristeza virus. These pests not only reduce profitability but often threaten export markets. Due to these increasing losses, farmers are looking to USDA and Land Grant

University research and extension scientists to provide new and improved pest management strategies. The IPM initiative will achieve this by 1) providing farmers with pest control tools

including chemical pesticides, biological control products or cultural tactics to replace agricultural chemicals which are currently under regulatory consideration or whose registrations have been voluntarily cancelled by registrants, 2) offering alternatives where pest resistance limits IPM options, and 3) providing biologically-based and other sustainable strategies for management of existing and new pests in cropping systems.

IPM is a science-based strategy that provides answers to important pest control problems by identifying and introducing new pest control tools for farmers emphasizing biologically-based IPM products and ecological principles. It is the only proven approach that can simultaneously: 1) increase producer profitability and competitiveness; 2) provide consumers with safe, high quality, economical supply of food and other agricultural products; 3) reduce environmental and human health risks associated with pesticide use on farms, ranches, homes, parks, forests, buildings, and range lands; 4) open and enhance new export markets, 5) enhance the sustainability of natural resources, and 6) support new business opportunities in consulting and production of new IPM products.

The IPM initiative will identify new pest management tools through fundamental research and transfers the science from the laboratory to the farm to enable farmers to solve priority pest control problems. A unique feature of the IPM initiative is that it is based on grower-identified research and extension needs and voluntary implementation. The Initiative engages in a partnership with the land-grant university system, appropriate federal agencies, commodity groups, farmers, and other stakeholders. Over 4,000 customers, including over 3,000 farmers are currently involved in identifying priority research and extension needs for IPM implementation for key commodities at the State level. In addition to the State-level needs assessment process, 23 production region IPM teams in 44 States have identified needs for region-wide crop production system.

Question. What is the current level of funding for this initiative and what additional resources are requested for this initiative in the FY 1997 budget?

Answer. [The information follows.]

Integrated Pest Management
(\$000)

Program	Fiscal Year 1996	Fiscal Year 1997
Research Activities		
ARS Areawide IPM	\$3,772	\$5,954
CSREES		
Integrated Pest Management & Biological Control	2,731	8,000
Emerging Pest and Disease Issues	1,623	4,200
Expert IPM Decision Support System	177	300
ERS IPM Research	--	500
Subtotal, Research	<u>8,303</u>	<u>18,954</u>
Extension Activities:		
Pest Management	<u>10,783</u>	<u>15,000</u>
Total	<u>\$19,586</u>	<u>\$33,954</u>

Question. What additional investment will be required to achieve the Department's goal of adopting IPM practices on 75 percent of U.S. crop acreage by the year 2000?

Answer. The budget request for the USDA IPM Initiative is based on meeting farmer and other stakeholder-identified research and extension needs for IPM implementation within a 6-7 year time period. Research and extension programs in direct support of the Initiative are estimated at about \$34 million for FY 1997, an increase of about \$14.4 million from the 1996 level. In FY 1998, our budget will be based on identified needs to successfully implement basic to advanced IPM strategies on 75 percent of the nation's crop land. In addition, the Department will need to continue to support the underlying research, education and application programs. The 1997 budget request for these IPM-related programs and activities is \$170.9 million.

These funding request for FY 1997 is primarily targeted for the following areas: IPM and Biological Control Research, Pest Management Education, and Emerging pest and Disease Issues. These resources will support: 1) on-going core regional and state programs, 2) new production system IPM development and implementation projects, and 3) the development of alternative management technologies. Funding for new IPM research, extension, and technology transfer programs is needed to support regional competitive grants programs. Currently, these activities are supported by special research grants and 3(d) funds.

The four regional competitive grant programs will be supported with \$3.8 million of the total IPM Biological Control budget line, and about \$.7 million from the IPM extension 3(d) funds. This level of support will ensure that the research and technology transfer needs and priorities identified by production region and state IPM teams, are adequately met for FY 1997. In addition, the fundamental research supported by the National Research Initiative and the Agricultural Research Service (ARS) enhances IPM component and systems research program.

The Department has planned a three-phase process to develop and implement IPM practices for crop production systems in the specified regions. This process is essential in developing and providing the needed tools for farmers to adopt IPM methods. These phases are as follows;

Phase I: Formation and development of IPM project development teams that address cropping systems in crop production regions. In 1995 and 1996, 23 such IPM teams composed of farmers, consultants, research and extension staff, state and federal agencies, and other stakeholders, identified priority research, education, and technology transfer needs to implement new and improved IPM programs for specific crop production systems. In FY 1997, the Department envisions expenditures of \$.4 million to develop approximately 20 new production system teams that will address cropping systems not previously addressed. These teams will develop implementation project plans for funding in FY 1998. In addition, the teams will address IPM implementation for 40-45 major cropping systems in the U.S. and will incorporate needs and priorities from state-level teams.

Phase II: Initiation of specific crop production system IPM development and implementation projects that address the identified research and extension education needs. To achieve these needs, the IPM program leaders envision that approximately 30-35 projects will be needed to achieve the Department's goal of implementing IPM practices on 75 percent of U.S. acreage. The selected projects which aim to develop and implement IPM practices for regional cropping systems, will be chosen based on needs identified by IPM teams and will be competitively funded in FY 1997 and FY 1998. Requested funding for FY 1997 will fund approximately 16 projects, with up to \$.5 million per project per year. The projects will be funded up to 6 years with a mandatory mid-point review. As many as 16 additional projects will be initiated in FY 1998 for cropping systems not addressed in the previous year.

Phase III: Privatization of regional IPM cropping systems. Experience has shown that implementation of IPM and privatization by farmers, crop consultants, IPM cooperatives or pest management associations has occurred where adequate IPM tools have been developed and economic and environmental benefits are identifiable. Phase II projects will provide the needed prerequisites for privatization. The development of private sector IPM services will be much slower without the support of the Initiative. Core formula extension and research programs in addition to ongoing base IPM support for regional IPM grant projects will provide the needed education and technology transfer to farmers, crop consultants, cooperatives and agribusinesses. Extension educators associated with the Health, Environmental and pesticide Safety Education Program (formally called the Pesticide Application Program) will be critical in educating pesticide applicators and operators in IPM based pest control technology. Proposed funding in FY 1997 for Phases I and II is \$8.4 million, funded jointly through special research grants and Smith-Lever 3(d) budget lines.

In FY 1997, additional support is also needed for the Emerging Pest and Disease Issues budget line (formerly called Alternative to pesticides and critical issues). This competitive grants program focuses on 1) providing farmers with chemical pesticides, biological control products or cultural tactics to replace agricultural chemical which are currently under regulatory consideration or whose registrations have been voluntarily cancelled by registrants and for which there are not effective alternatives, 2) providing alternatives where pest resistance limits IPM options, and 3) helping producers implement new alternative pest management tactics. The development of the decision support system also comes from this budget line-item. The FY 1997 funding request for this program is \$4.5 million.

Question. What is the fiscal year 1996 total level of funding for the Integrated Pest Management Initiative and what is the total level proposed for fiscal year 1997? Please provide a breakdown by appropriations account for each of these fiscal years.

Answer. [The information follows.]

Integrated Pest Management
(\$000)

<u>Program</u>	<u>Fiscal Year 1996</u>	<u>Fiscal Year 1997</u>
Research Activities		
ARS Areawide IPM	\$3,772	\$5,954
Integrated Pest Management & Biological Control	2,731	8,000
Emerging Pest and Disease Issues	1,623	4,200
Expert IPM Decision Support System	177	300
Subtotal	<u>8,303</u>	<u>18,454</u>
Extension Activities:		
Pest Management	<u>10,783</u>	<u>15,000</u>
Total	<u>\$19,586</u>	<u>\$33,454</u>

OFFICE OF THE INSPECTOR GENERAL

Question. The fiscal year 1997 budget requests that the limitation on confidential operational expenses of the Office of Inspector General be increased from \$95,000 to \$125,000. The explanatory notes indicate that demands on these funds have increased in the past several years. Please provide a table showing the actual amount spent for confidential operational activities in

each of the last ten fiscal years and the estimates for fiscal years 1996 and 1997.

Answer. I will provide the information for the record.

(The information follows:)

<u>Year</u>	<u>Spent</u>
1986	\$41,000
1987	59,000
1988	53,528
1989	45,761
1990	67,151
1991	42,445
1992	94,000
1993	77,285
1994	83,995
1995	80,577
1996 est.	95,000
1997 est.	125,000*

At various times during the year while conducting certain investigations, most of the money would be in use; however, at the close of each fiscal year, funds not actually spent were returned to the Treasury.

*OIG has requested an increase in authority to \$125,000 based on projected need for these resources.

Question. The fiscal year 1996 appropriations act provides authority for the Office of Inspector General to accept funds from forfeitures as reimbursement for the costs of the investigations. Funds from forfeitures are to be credited to the Office's appropriations account and directed back into USDA investigations.

I note that the budget does not reflect the transfer of funds to the Office pursuant to this new authority in either fiscal year 1996 or 1997. Why?

Answer. We are in the process of developing our internal procedures for accepting the funds. Under the asset forfeiture law, they cannot be included with our direct appropriations. These funds will be placed in special accounts established by the U.S. Department of the Treasury for this purpose. We are also currently working out some of the details with USDA's National Finance Center on the transfer of funds. In addition, a draft memorandum of understanding between OIG and the U.S. Department of the Treasury is currently under review. As soon as the procedures are in place, we will implement this program.

ADVISORY COMMITTEES

Question. Please provide a justification of the increase or decrease proposed for fiscal year 1997 for each Advisory Committee.

Answer. The small increase in fiscal year 1997 will allow the existing advisory committees to continue to function at the fiscal year 1996 level.

The increase for the Census Advisory Committee on Agriculture Statistics will provide a continuing body of outside, professional knowledge regarding the data needs of the agricultural community. In addition, the increase will allow the Committee to prepare recommendations regarding the contents of agriculture reports, and present the views and needs for data of major suppliers and users of agriculture statistics.

The Marine Mammal Negotiated Rulemaking Committee and the Advisory Committee on Concentration will be terminated in fiscal

year 1997. The Marine Mammal Rulemaking Committee was a two-year committee.

We anticipate that the Farm Bill will terminate the following committees that were proposed for funding in the fiscal year 1997 budget: Animal Health Science Research Advisory Board, Committee of Nine, and the National Sustainable Agriculture Advisory Council. In addition, the Agricultural Biotechnology Research Advisory Committee and the Science and Education National Research Initiative Advisory Committee both of which were created by the Department will not be continued. The Department is evaluating the impact of these changes on advisory committee funding levels.

Question. Why is an increase proposed for the National Organic Standards Board? The Agricultural Marketing Service indicates that the Board will complete its review and recommendations for the national list this year and that it will complete the Organic Certification program in fiscal year 1996.

Response. Although the Board has accomplished much since its inception, its work is not complete. The Board has a continuing responsibility to review substances which are currently on the national list as well as those being considered for addition to the national list. The Organic Foods Production Act calls for a review of each substance within five years of its placement on the national list unless the Board calls for a more frequent review. The Act also specifies a petition process whereby new materials may be considered by the Board for addition to the list. In addition, the Board will make recommendations to the Secretary regarding aspects of the program not adequately addressed in the rules. Given the broad scope of the organic industry, implementation of the national organic program is complex and may require adjustments after operations begin. These adjustments will be carefully considered by the National Organic Standards Board and recommendations for efficient operations will be given to the Secretary.

CONGRESSIONAL RELATIONS

Question. note that the fiscal year 1997 budget requests a \$45,000 increase for the Office of the Assistant Secretary for Congressional Relations but proposes no increase in the amount to be transferred to USDA agencies funded in the Agriculture Appropriations Act to maintain personnel at the agency level. Why?

Answer:. In support of the Secretary's Streamlining effort and the Administration's administrative efficiency reductions, no increases were requested in the amounts to be transferred to the USDA agencies. The agencies will reduce discretionary expenses to achieve the savings.

Question. Would you please provide an agency breakdown of the \$2,355,000 proposed to be transferred to maintain Congressional personnel at the agency level in fiscal year 1997.

Answer. I will provide this information.
[The information follows:]

<u>Agency</u>	<u>Amount</u>
Office of the Chief Economist	\$49,000
Office of the Inspector General	49,000
Agricultural Research Service	129,000
Cooperative State Research, Education and Extension Service	120,000
Foreign Agricultural Service	188,000
Farm Service Agency	355,000
Rural Utilities Service	142,000
Rural Business Service	52,000
Rural Housing Service	251,000
Natural Resources Conservation Service	148,000
Animal and Plant Health Inspection Service	101,000

Agricultural Marketing Service	176,000
Grain Inspection, Packers and Stockyards Administration	16,000
Food Safety & Inspection Service	309,000
Food and Nutrition Service	270,000
Total	<u>\$2,355,000</u>

LOWER MISSISSIPPI DELTA NUTRITION INTERVENTION RESEARCH INITIATIVE

The Lower Mississippi Delta Nutrition Intervention Research Initiative is a collaborative effort of USDA's Agricultural Research Service, the University of Southern Mississippi and Alcorn State University; Southern University and the LSU Pennington Biomedical Research Center in Louisiana; and the University of Arkansas for Medical Sciences and, the University of Arkansas at Pine Bluff.

Question. How are the plans progressing for the Lower Mississippi Delta Nutrition Intervention Research Initiative?

Answer. The initiative is well on its way toward the goal of developing appropriate strategies to impact public acceptance of more positive changes in individual dietary habits. Related issues were addressed in an opening planning conference in April 1995. In this first year of the initiative participants accomplished the following:

- created a team consisting of 7 institutions of widely different perspectives and established an organizational working structure;
- collected and organized all relevant existing information on regional ecology and sociodemographics, community resources, health and nutritional status demographics, and food security and accessibility into a monograph to be published in the summer of 1996;
- held two symposia with internationally renowned experts on community intervention and dietary assessment;
- established criteria for community selection used by the State institutions to identify the 10-15 communities within each state from which the population group will be chosen for assessment; and
- disseminated to all institutions the first draft of the research design.

Question. Are planned funding levels going to be adequate to provide meaningful data and intervention strategies over the expected time frame for the project?

Answer. We believe the proposed funding level in the 1997 budget is adequate for the tasks we have set for ourselves in 1997. The plan identifies basic studies that will be essential for reaching general conclusions and a range of opportunities for research enhancements. At these higher levels we would allow longitudinal studies of selected sub-population groups of Delta residents and testing of carefully designed and sustainable interventions with residents who are at-risk. This will enable researchers to assess a variety of nutritionally-related health outcomes related to the specified group.

Question. Are opportunities increasing for collaboration among the six participating institutions and USDA?

Answer. During the year of collaboration, many linkages have been developed among the six institutions and ARS. Ways of extending the collaboration and interacting with other interest groups are being addressed by the Steering Committee.

FOREIGN TRAVEL EXPENDITURES

Question. For each of fiscal years 1995 and 1996 would you please provide a table, by appropriations account, showing the total funds spent or allocated for travel and the portion of that amount spent or allocated for foreign travel.

Answer. The following table shows the total funds spend or allocated for travel for 1995 and 1996. Unless specified otherwise, the account within each agency is the Salaries and Expenses account. The amount for foreign travel that is included within the total travel and the percentage that foreign travel is of the total travel are also shown on the following table.

UNITED STATES DEPARTMENT OF AGRICULTURE TRAVEL (In Thousands of Dollars)						
Agency	FY 1995 Actual			FY 1996 Estimate		
	Total Travel	Foreign Travel	Percentage	Total Travel	Foreign Travel	Percentage
FARM AND FOREIGN AGRICULTURAL SERVICES						
Farm Service Agency	\$14,488	8	a/	\$17,647	10	a/
Commodity Credit Corporation	64	64	100%	19	19	100%
Foreign Agricultural Service:						
Annual	4,395	2,901	66%	5,502	3,631	66%
No year	469	256	55%	470	257	55%
Reimbursement	4,454	3,604	81%	4,461	3,609	81%
User Fee	33	23	70%	33	23	70%
Total, FAS	9,351	6,784	73%	10,466	7,520	72%
RURAL ECONOMIC AND COMMUNITY DEVELOPMENT						
Rural Utilities Service	3,185	35	1%	2,756	20	1%
Rural Housing Service	17,278	11	a/	11,370	12	a/
Rural Business-Cooperative Service	1,535	11	1%	1,305	10	1%
FOOD, NUTRITION, AND CONSUMER SERVICES						
Food and Consumer Service:						
Food Program Administration	2,798	0	0%	2,714	0	0%
Child Nutrition	704	0	0%	634	0	0%
Food Stamp Program	1,102	0	0%	940	0	0%
Total, FCS	4,604	0	0%	4,288	0	0%
NATURAL RESOURCES AND ENVIRONMENT						
Natural Resources Conservation Service:						
Conservation Operations	14,050	145	1%	14,857	145	1%
Wetlands Reserve Program	272	0	0%	643	0	0%
Watershed Surveys and Planning	459	1	a/	275	1	a/
Watershed & Flood Prevention Operations	2,877	2	a/	2,323	2	a/
Colorado River Salinity Control Program	100	0	0%	0	0	0%
Great Plains Conservation Program	172	0	0%	0	0	0%
Resource Conservation & Development Prog.	748	2	a/	729	2	a/
Rural Abandoned Mine Reclamation Program	65	0	0%	0	0	0%
Total, NRCS	18,743	150	1%	18,827	150	1%
FOOD SAFETY						
Food Safety and Inspection Service	19,654	326	2%	19,426	320	2%
RESEARCH, EDUCATION, AND ECONOMICS						
Agricultural Research Service	13,311	1,654	12%	13,000	1,650	13%
Cooperative State Research, Education, and Extension Service:						
Research and Education Activities	650	26	4%	630	30	5%
Buildings and Facilities	67	0	0%	67	0	0%
Extension Activities	397	10	3%	372	10	3%
Total, CSREES	1,114	36	3%	1,069	40	4%
Economic Research Service	520	163	31%	647	316	49%
National Agricultural Statistics Service	1,383	44	3%	1,371	25	2%
Animal and Plant Health Inspection Service:						
Salaries and Expenses (Annual)	13,525	1,249	9%	9,234	937	10%
Salaries and Expenses (No Year)	1,421	16	1%	811	13	2%
AQI User Fees	1,910	31	2%	1,600	26	2%
Total, APHIS	16,856	1,296	8%	11,645	976	8%
Agricultural Marketing Service:						
Marketing Services	1,477	611	41%	1,623	636	39%
User Fee	2,824	7	a/	3,150	9	a/
Perishable Agri. Commodities Act Fund	280	0	0%	331	0	0%
Section 32	372	0	0%	427	0	0%
Trust Funds	5,780	71	1%	4,916	60	1%
Milk Market Orders Assessment Fund	2,289	0	0%	2,449	0	0%
Total, AMS	13,022	689	5%	12,896	705	5%
Grain Inspection, Packers and Stockyards Administration	1,454	17	1%	1,474	17	1%

ADMINISTRATION

Office of the Secretary	283	10	4%	190	5	3%
Office of the Chief Economist	32	0	0%	47	0	0%
National Appeals Division	626	0	0%	556	0	0%
Office of Budget and Program Analysis	15	0	0%	14	0	0%
Office of Small & Disadv. Bus. Utilization	15	0	0%	10	0	0%
Chief Financial Officer	39	0	0%	46	0	0%
Office of Communications	94	1	1%	52	1	2%
Office of the Inspector General	5,341	47	1%	5,000	47	1%
Office of the General Counsel	156	0	0%	280	10	3%
Departmental Administration	376	12	3%	387	12	3%
Agriculture Buildings and Facilities	15	0	0%	24	0	0%
Hazardous Waste Management	227	0	0%	252	0	0%
Advisory Committees	243	0	0%	134	0	0%
TOTAL, USDA, Travel	\$144,024	\$11,356	8%	\$135,207	\$11,865	9%

a/ Less than one percent.

LEGISLATIVE PROPOSALS

Question. Please list by program, the legislative changes proposed in the FY 1997 Budget which would generate savings if enacted. Please indicate the savings assumed, both in budget authority and outlays, and whether the savings proposal would be enacted through authorizing legislation or appropriations bill language. If proposed to be enacted through authorizing legislation, please indicate when the proposed legislation will be submitted to the Congress for consideration.

Answer. The following is a list of savings proposals in the President's FY 1997 Budget submission. All of these would be made through changes to authorizing legislation.

Budget		
Authority	Outlays	
(Dollars in Millions)		

Rural Housing Service:

- Amend the Housing Act of 1949 to permit a balloon payment in the thirtieth year of the loan, thereby lowering the cost of the program (subsidy rate) and providing additional direct loan level for the Section 515 rural rental housing loan progra. The loan program would increase by \$36 million, from \$184 million to \$220 million. (To be submitted by late June)
- Establish a new Section 502 guaranteed rural housing loan program to refinance direct single family home loans to facilitate the graduation of direct loan borrowers into the private sector. (To be submitted by early June)

Food Safety and Inspection Service -109 -109

- New user fees to recover 100 percent of the cost of providing inspection service beyond a primary approved shift for meat, poultry and egg processing establishments. (Submitted March 23, 1995)

Animal and Plant Health Inspection Service . . . -8 -8

- New user fees for animal welfare, biotechnology/environmental protection, and veterinary biologics. (Submitted August 4, 1995)

Grain Inspection, Packers and Stockyards

Administration -17 -17

- New user fees to recover the cost of standardization activities and license fees to administer the Packers and Stockyards Act. (Submitted April 14, 1995)

Agricultural Marketing Service -10 -10

- New user fees to recover the cost of administering marketing agreements and orders. (Submitted April 14, 1995)

Total, Proposed Legislation \$144 -\$144

The Administration is also proposing authorizing legislation that would increase costs for the Distance Learning and Medical Link Program as follows:

Budget	
Authority	Outlays
(Dollars in Millions)	

Rural Utilities Service:

Distance Learning and Medical Link (DLM)		
Loan Program Account	\$2	\$1

- Create a loan program that would be used to bring rural areas advanced telecommunications services.

This proposal is part of the Farm Bill legislation pending before the Congress.

[Clerk's Note: Subsequent to the hearing, the Federal Agriculture Improvement and Reform Act of 1996, P.L. 104-127, was enacted and authorizes a "cost of money" loan program for Telemedicine and Distance Learning Services.]

EXPIRING AUTHORIZATIONS

Question. Please list all appropriations requested in the President's fiscal year 1997 budget for which authorizations are expiring at the end of fiscal year 1996, lack existing authorization, or exceed the authorized fiscal year 1997 funding level.

Answer. It appears that most of USDA's expiring legislation will be reauthorized by the 1996 farm bill. In addition, Section 515 Rural Rental Housing Program, the Dairy Indemnity Program and the Nutrition Program for the Elderly require reauthorization.

[Clerk's Note: Subsequent to the hearing, the Section 515 Rural Rental Housing Program was extended through September 30, 1996 by the Housing Opportunity Program Extension Act of 1996, P.L. 104-120, approved March 28, 1996. The Federal Agricultural Improvement and Reform Act of 1996 (FAIR Act) authorized a level of \$630 million for direct farm operating loans compared with a request of \$650 million for these loans. For guaranteed farm operating loans, the FAIR Act authorized \$1.95 billion and the President's budget proposes \$2.0 billion.]

Question. Please provide a justification of the increase or decrease proposed for fiscal year 1997 for each Advisory Committee.

Answer. I will gladly provide that information.
(The information follows:)

USDA ADVISORY COMMITTEES	
Policy Area and Committee Title	Reason for Increase/Decrease
FOOD, NUTRITION AND CONSUMER SERVICES:	
National Advisory Council on Maternal, Infant and Fetal Nutrition	Increase due to inflation
National Advisory Council on Commodity Distribution	Increase due to inflation
FOOD SAFETY:	
National Advisory Committee on Meat and Poultry Inspection.....	Increase due to inflation
National Advisory Committee on Microbiological Criteria for Foods.....	Increase due to inflation

USDA ADVISORY COMMITTEES	
RESEARCH, EDUCATION AND ECONOMICS:	
Nat'l Ag. Research Extension Education and Economics Advisory Board..	Increase due to inflation
Science and Education National Research Initiative Advisory Committee..	Increase due to inflation
National Genetics Resources Advisory Council	Increase due to inflation
National Nutrition Monitoring Advisory Council	Increase due to inflation
Animal Health Science Research Advisory Board	Increase due to inflation
Forestry Research Advisory Council	Increase due to inflation
Committee of Nine	Increase due to inflation
Agricultural Biotechnology Research Advisory Committee	Increase due to inflation
National Sustainable Agriculture Advisory Council	Increase due to inflation
Census Advisory Committee on Agriculture Statistics	Increase due to new committee
MARKETING AND REGULATORY PROGRAMS:	
Federal Grain Inspection Advisory Committee	Increase due to inflation
Advisory Committee on Foreign Animal and Poultry Diseases	Increase due to inflation
General Conference Committee of the National Poultry Improvement Plan	Increase due to inflation
National Animal Damage Control Advisory Committee	Increase due to inflation
Marine Mammal Negotiated Rulemaking Advisory Committee	Decrease due to termination
National Organic Standards Board	Increase due to inflation
Advisory Committee on Agriculture Concentration	Decrease due to termination
FARM AND FOREIGN AGRICULTURAL SERVICES:	
Agricultural Policy Advisory Committee for Trade	Increase due to inflation
Ag Tech. Adv. Comm. for Trade in:	
Animals & Animal Products	Increase due to inflation
Fruits and Vegetables	Increase due to inflation
Grain, Feed & Oilseeds	Increase due to inflation
Sweeteners	Increase due to inflation
Tobacco, Cotton & Peanuts	Increase due to inflation
Beginning Farmers and Ranchers	Increase due to inflation
Net Change from fiscal year 1996	+\$56,000

QUESTIONS SUBMITTED BY SENATOR SPECTER

RURAL BUSINESS ENTERPRISE GRANTS

Question. The Senate, in the FY'96 Agriculture Appropriations Committee Report encouraged the Department of Agriculture to specifically consider using funds from the Rural Economic and Community Grant program to approve an application by the Union County (PA) Planning Commission to help finance the construction of the proposed Union County Business Park. Union County has an opportunity to purchase the site of the Business Park at a cost below market value using local sources of revenue. However, the County requires federal assistance in designing and developing the site. Total project cost is estimated at \$13 million and necessitates a federal contribution of \$2.7 million. Although the Union County Planning Commission has submitted an application for a Rural Economic and Community Grant, they were informed that the Department was not following the Senate recommendations and was instead distributing the funds at their own discretion. I would appreciate your informing me as to whether the Department has actually decided to allocate the grants using their own discretion instead of following the advice of Congress?

Answer. Based on language contained in the Conference Report on the 1996 appropriations bill and a subsequent letter the Department received from Senator Cochran, it is clear that Congress expected the Department to give full consideration to various projects referred to in both the Senate and House Reports on the bill, but to make awards on the basis of merit. The Department is following this advice. For the record, I have included the relevant section of the conference report as well as the text of the letter from Senator Cochran.

[The information follows:]

Partial text of the Joint Explanatory Statement of the Conference Committee
(H. Rept. 104-268) accompanying H.R. 1976, the fiscal year 1996 Agriculture, Rural Development, and Related Agencies Appropriations Act (P.L. 104-37):

"The House and Senate reports include lists of projects to be considered by the Department under the Rural Business Enterprise Grants program. The conferees believe that there will be other commendable applications to the Department in addition to those mentioned in the reports. The conferees expect the Department to approve only those applications judged meritorious when subjected to the established review process."

Text of December 4, 1995, letter from Senator Cochran, Chairman; Subcommittee on Agriculture, Rural Development, and Related Agencies; Committee on Appropriations:

"It has come to my attention that the Department may have misinterpreted language regarding applications for certain rural development grant programs included in the Joint Explanatory Statement of the Conference Committee
(H. Rept. 104-268) accompanying H.R. 1976, the fiscal year 1996 Agriculture, Rural Development, and Related Agencies Appropriations Act (P.L. 104-37).

The Conference Committee encourages the Department to give consideration to those applications for Rural Business Enterprise Grants (RBEG) from a number of organizations mentioned in the House, Senate and conference reports. It is my understanding that the Department has viewed these recommendations as earmarks, thereby reducing or, in some cases, eliminating the allocation of funds States would have otherwise received.

This policy directly conflicts with language included in the Senate report and in the Joint Explanatory Statement of the Conference Committee which states that the Department should only "approve those applications judged meritorious when subjected to the established review process." I hope you will review this matter and modify the Department's current policy to reflect the Congressional intent as stated in the Joint Explanatory Statement of the Conference Committee."

Question. Can you also provide me with information on the criteria the Department will now be using in awarding these grants to applicants?

Answer. The selection criteria and points for the Rural Business Enterprise Grant program are as follows:

Priorities	Points
A. Population	
Proposed project is located in a rural community having a population:	
Between 15,000 and 25,000	5
Between 5,000 and 15,000	10
Under 5,000	15

B. Economic Conditions

1. Proposed project will be located in areas where the unemployment rate exceeds the State unemployment rate by:
 - a. 25 percent or more 20
 - b. less than 25 percent 10
 - c. equal to or less than State rate 0
2. Proposed project will be located in areas where the median household income (MHI) of the population to be served by the proposed facility is:
 - a. Less than the poverty line for a family of four as prescribed by section 673(2) of the Community Services Block Grant Act 25
 - b. More than the poverty line and less than 85 percent of the State's MHI. 15
 - c. More than the poverty line and between 85 percent and 100 percent of the State's MHI. 10
 - d. Equal or greater than the State MHI. 0

C. Experience

Applicant has substantial experience in administering a rural economic development program. 15

D. Other

1. Applicant has written evidence of commitment from small business that small business development will occur by startup or expansion as a result of the grant. 25
2. Grant contains evidence that a substantial commitment of funds from nonfederal for proposed project is:
 - a. more than 50 percent 15
 - b. more than 25 percent and less than 50 percent 10
 - c. between 5 percent and 25 percent 5
3. For grants to establish a revolving fund, points will be distributed if the grant request contains proposed third party loan/grant recipients. 2
4. The proposed project will create and/or save jobs at:
 - a. one job per each \$10,000 or less in grant funds expended 10
 - b. one job per each \$10,000 to \$25,000 in grant funds expended 5
5. Proposed project is consistent with, and is reflected in, local plans for the area. 5
6. Grant projects utilizing funds available under this subpart are:
 - a. less than \$100,000 25
 - b. \$100,000 to \$200,000 15
 - c. more than \$200,000 to \$500,000 10
7. Grant for television demonstration programs contains justification for a need for the information to be provided through the project is provided. 25

E. Discretionary points for initial grants of not more than \$500,000. Give written justification. up to 50

EMERGENCY WATERSHED PROTECTION PROGRAM

Question. You stated the Department is requesting \$228.6 million in funding to restore damage caused by the severe winter storms. If the conferees to the FY 96 Omnibus Appropriations Bill provide this level of funding, how much do you expect to provide for projects being administered under the Natural Resources Conservation Service Emergency Watershed Protection Program?

Answer. We expect to provide \$100 million for the Emergency Watershed Protection Program at the level requested by the Department if the full amount of the supplemental is appropriated.

Question. Pennsylvania currently has 198 unfunded emergency projects, expected to cost \$5.9 million. Do you expect the amount anticipated in the Omnibus Appropriations Bill to allow for the completion of these projects?

Answer. Approximately 75% of Pennsylvania's unfunded \$5.9 million emergency projects will be funded from the Omnibus Appropriations Bill if it is enacted as proposed.

RESCISSION

Question. You mentioned in your testimony a proposed rescission of \$12 million in the Department's buildings and facilities account. I am concerned with the possible impact of this rescission on a project important in helping the American agriculture/food sector meet the challenge of satisfying changing consumer demand in the U.S. as well as capturing markets abroad, the Center for Food Marketing located at St. Joseph's University. Therefore, I would appreciate your informing me which projects in that account will be affected by the rescission?

Answer. Included in the FY 1997 President's Budget is a proposed rescission for FY 1996. The rescission reduces funding for the FY 1996 CSREES Building and Facilities Program by \$12.0 million, from \$57.838 million to \$45.838 million. Congress identified 11 construction projects that would be completed with FY 1996 funding and 17 that would require funding in FY 1997. The rescission proposes an across-the-board reduction of 35.3% about \$12 million for the 17 construction projects to be completed in FY 1997. No reduction is proposed for the 11 projects to be completed in FY 1996.

Of the \$12.0 million reduction, \$2.5 million would be taken from the Buildings and Facilities Program to offset a supplemental for ARS in FY 1996 to fund BARD. The remaining \$9.5 million would offset a supplemental for FSIS to conduct inspection Services. (The information follows.)

BUILDINGS AND FACILITIES PROPOSED RESCISSION

<u>CSREES BUILDINGS & FACILITIES</u>	FY 1996 Appropriation	Change	Proposed FY 1996 Rescission
CALIFORNIA			
Alternative Pest Control Containment & Quarantine Facility, University of California	\$3,057,000	--	\$3,057,000
DELAWARE			
Poultry Biocontainment Laboratory University of Delaware	1,751,000	--	1,751,000
FLORIDA			
Aquatic Research Facility, University of Florida	1,500,000	--	1,500,000
LOUISIANA			
Southeast Research Station, Franklinton	1,280,000	--	1,280,000
MISSISSIPPI			
Biological Technology Center for Water & Wetlands Resources, University of Mississippi	1,555,000	--	1,555,000
National Food Service Management Institute	3,000,000	--	3,000,000
NEW YORK			
New York Botanical Garden	1,665,000	--	1,665,000

OKLAHOMA			
Grain Storage Research & Extension Center, Oklahoma State University	495,000	--	495,000
PENNSYLVANIA			
Center for Food Marketing, St. Joseph's University Pennsylvania	2,438,000	--	2,438,000
RHODE ISLAND			
Building Consolidation, University of Rhode Island	3,854,000	--	3,854,000
WASHINGTON			
Wheat Research Facility, Washington State	3,251,000	--	3,251,000
ALABAMA			
Poultry Science Facility, Auburn University	1,338,000	473,000	865,000
ARKANSAS			
Cornell Hall Alternative Pest Control Center	1,000,000	353,000	647,000
CONNECTICUT			
Agricultural Biotechnology Laboratory, University of Connecticut	1,347,000	476,000	871,000
ILLINOIS			
Biotechnology Center, Northwestern University	1,366,000	482,000	884,000
MARYLAND			
Institute for Natural Resources and Environmental Science, University of Maryland	2,288,000	808,000	1,480,000
MASSACHUSETTS			
Center for Hunger, Poverty, Nutrition and Policy Tufts University	1,641,000	579,000	1,062,000
MISSOURI			
Center for Plant Biodiversity, St. Louis	3,995,000	1,410,000	2,585,000
NEW JERSEY			
Plant Bioscience Facility, Rutgers University	2,262,000	799,000	1,463,000
NEW MEXICO			
Center for Arid Land Studies, New Mexico State University	1,464,000	517,000	947,000
NORTH CAROLINA			
Bowman-Gray Center, Wake Forest University	3,000,000	1,059,000	1,941,000
OREGON			
Forest Ecosystem Research Laboratory, Oregon State University	5,000,000	1,765,000	3,235,000
SOUTH DAKOTA			
Animal Resource Wing, South Dakota State	2,700,000	952,000	1,748,000
TENNESSEE			
Agricultural, Biological & Environmental Research Complex University of Tennessee, Knoxville	1,928,000	681,000	1,247,000
TEXAS			
Southern Crop Improvement, Texas A&M	1,400,000	494,000	906,000
VERMONT			
Rural Community Interactive Learning Center, University of Vermont	2,000,000	706,000	1,294,000
WASHINGTON			
College of Veterinary Medicine, Animal Disease Biotechnology Facility, Washington State	<u>1,263,000</u>	<u>446,000</u>	<u>817,000</u>
Total	<u>\$57,838,000</u>	<u>\$12,000,000</u>	<u>\$45,838,000</u>

QUESTIONS SUBMITTED BY SENATOR BOND

SMALL ENTITY COMPLIANCE GUIDES

Question. What is the department doing to ensure that it will draft small entity compliance guides in easily understood language?

Answer. The Small Business Regulatory Enforcement Fairness Act contains a variety of new requirements intended to facilitate small business compliance with the requirements of Federal regulatory programs. We intend to do our best to make sure that we implement these requirements as effectively as we can. We are now reviewing the departmental regulations that govern our rulemaking activities and will either incorporate the new requirements into existing procedures or issue separate directives so that all of our USDA agencies will have a clear sense of the purpose and nature of these requirements.

I think that the Administration and USDA have already made good progress in improving and streamlining our regulations pursuant to the President's reinvention initiative. In putting the new law into effect, I think we can build on this progress. We will do our best to ensure sound, user-friendly regulations that respond thoughtfully to the concerns of small business, and, indeed, to the concerns of all affected parties and interests.

THE REGULATORY FLEXIBILITY ACT

Question. The Regulatory Flexibility Act requires the department to describe actions taken to minimize the impacts of regulations on small entities. Under what circumstances would the department promulgate a rule that does not minimize the impact on small entities to the maximum extent allowed by the underlying statute?

Answer. The Regulatory Flexibility Act requires the Department to evaluate carefully the impact of a proposed rule on small entities. Wherever a regulatory flexibility analysis is required, this evaluation must include consideration of any significant alternatives to the proposed rule which will both achieve the objectives of the statute involved and minimize any significant economic impact on small entities. The RFA's requirements complement, and are thoroughly consistent with, the regulatory principles enunciated by President Clinton when he issued Executive Order 12866, the order that governs all of our rulemaking activities. The regulatory principles of the executive order were, of course, reinforced by the President's reinvention initiative that emphasizes cutting red tape, getting back to basics, relying on market solutions when possible, and replacing regulations with incentives.

I believe the Department is doing good job in adhering to the letter and spirit of these requirements, and the answer to your question is that there is no set of circumstances where we wouldn't scrutinize a regulatory proposal for its adverse impacts on small business and seek to minimize those effects in the final rule. Whether a final rule minimizes the effect on small entities to the maximum extent permitted by the applicable statute will ultimately depend not only on the requirements of the statute involved, but also on the purposes and objectives of the rule.

Question. Can the department describe its position on reducing or waiving penalties on small entities, and how will the department be implementing this policy in accordance with the Act?

Answer. Section 223 of the Act directs agencies regulating the activities of small entities to establish a policy or program, within 1 year of enactment, to provide for reductions, or where appropriate, waivers, of civil penalties for violations of statutory or regulatory requirements by small entities.

The Department has already issued a policy for the waiver or reduction of penalties for small businesses. In April 1995, the President directed the heads of executive branch agencies to use their discretion to waive, in appropriate circumstances, the imposition of all or a portion of penalties on small businesses. I issued Secretary's Memorandum 3031-1, effective October 10, 1995, implementing the President's directive. Memorandum 3031-1 provides that under appropriate circumstances penalties on small businesses can be reduced or waived if specified corrective action is taken by the small business. The Department published a notice in the Federal Register on January 26, 1996, announcing this policy.

Question: Can the department detail the factors it will use to determine whether a proposed rule will have a "significant impact on a substantial number of small entities," thus requiring a regulatory flexibility analysis?

Answer: The Regulatory Flexibility Act spells out a comprehensive set of factors to be considered in making that determination. As I indicated before, our RFA analysis is buttressed by the requirements of Executive Order 12866, that requires us to assess the costs and benefits of a proposed rule, using the best reasonably obtainable scientific, technical, and economic data, and to issue a rule only when we have concluded that the benefits of a rule justify its costs. Overall, I think these requirements provide an excellent basis for making the required determination under the RFA.

Question: Will the department by using the SBA's definition of "small business concerns" for the purpose of implementing the Act, and if not, what is the justification for using a separate definition?

Answer: Generally, the Department uses the Small Business Administration's definitions in performing the analysis under the Regulatory Flexibility Act. For most rulemakings, USDA agencies will continue to use the SBA definitions for any regulatory flexibility analyses required by this Act. Although atypical, there may be instances when it is more appropriate to use alternative definitions or different or additional criteria for such analyses. In any such instances, USDA agencies would comply with the requirements in the Small Business Act for prescribing a size standard for categorizing a business as a small business concern.

QUESTIONS SUBMITTED BY SENATOR GORTON

PRESIDENT'S NORTHWEST FOREST PLAN

One area, among others, the agriculture budget would increase is the President's NW Forest Plan. Funding increases from \$96 million in FY 1996 to \$107 million in FY 1997, an increase of \$11 million.

Areas referenced in the USDA summary under the President's NW forest plan were "watershed assessments and continued extensive monitoring to ensure that the NE forest plan's standards and guidelines are being met." Also, "technical and economic assistance to communities and individuals who have been dependent on Federal timber supplies," as well as, "ecosystem planning" as areas needing additional funding.

Question. What type of ecosystem planning is specifically being referred?

Answer. Ecosystem planning required under the NW Forest Plan includes the following: Late Successional Reserves, Management Plans for Adaptive Management Areas, and the development of management guides for the protection of certain species listed in

the "Survey and Manage" requirements of the April 13, 1994 Record of Decision (ROD) and related Standards and Guidelines. The ROD identifies these as certain "...species of plants and animals, particularly amphibians, bryophytes, lichens, mollusks, vascular plants, fungi, and arthropods," and specifically lists some 350 of them. This includes a variety of fungi, mushrooms, salamanders, etc. which are characteristic of late successional forests. Little may be known about them or they may be in decline. These are in addition to watershed analysis requirements. Planning is also involved in setting up protocols to collect information about "survey and manage species," and designing the monitoring portions of the plan. Planning functions also include support for interagency and public participation. Finally, several forests have identified a need for some plan amendments which are needed to better accomplish plan objectives.

Question. Will this increase help the Administration to meet its own timber promises to the Pacific Northwest?

Answer. Yes it will. The increase includes funds to fully implement the President's Sustainable Timber Program. In FY 1997 the 17 National Forests included within the President's NE Forest Plan will offer 763 Million Board Feet (MBF), compared to the expected offer level of 611 MBF for FY 1996. This includes the 10 percent other (cull, submerchantable material, firewood, and other products) volume provided for in the plan.

Question. What programs do you plan to increase and why?

Answer. Program increases are as follows:

Program*	(\$ Thousands)	Description
Sustainable Timber	1,100	Increased volume offered by 152 MBF.
Adaptive Management	1,500	Increased prevention activities by working with land managers to target treatments to enhance and protect forest health.
Planning	2,100	The increase in the planning component would be used to implement ROD requirements for "survey and manage species" identified in the Northwest Forest Plan. This includes developing protocols for studying them, as a precursor to actual inventory, as well as developing related management guides. Knowledge gained would be incorporated into forest plans, and adjustments made as appropriate.
Monitoring	3,700	This increase supports an interagency, State and public involvement process that uses scientifically replicatable evidence to evaluate and adjust the plan. In the 4th year of implementation, we will increase both "Implementation and Monitoring: to verify that the Plan is being implemented correctly; and "Effectiveness Monitoring" to verify that the Plan objectives are being achieved.

Jobs in the Woods	2,500	Funds will be used to increase the number of jobs developed for timber dependent communities. The jobs will be designed to perform restoration projects on National Forest System lands.
Project Costs	2,300	The increase is essential for the Jobs in the Woods Program. It provides funds for project design and development and local community coordination not covered in the Jobs in the Woods category above.

*Total increase add to \$13.2 million. There were also decreases of \$1.6 million in watershed assessment and rural assistance work.

KARNAL BUNT

Question. We have heard about the appearance of the fungus Karnal Bunt in some wheat producing areas of the country. What is the magnitude of this problem. Is this episode of contaminated wheat over, and what has been the reaction of nations importing our wheat?

Answer. Karnal bunt have been found on wheat that was grown in parts of Arizona and California. In addition, infected wheat seed is known to have been planted in Texas and New Mexico. Secretary Glickman has declared the Karnal Bunt infestation to be an "extraordinary emergency", and the animal and Plant Health Inspection Service has mounted a concerted effort to contain and eradicate the disease. Surveys of wheat, equipment, and grain handling facilities are ongoing, and the final magnitude of the problem has yet to be determined.

This episode is not over, because we do not yet know the extent of the problem. In any case, the fungal spores can survive for years in the soil; and a continuing effort will be needed to monitor for the presence of this disease throughout the country and to maintain eradication programs for some time to come.

More than 30 countries that import wheat from the United States have quarantine restrictions on Karnal bunt. Shortly after the disease was found, negotiations were undertaken to maintain as many of those markets as possible. In many cases, agreements are in place that allow exports from areas of the U.S. not known to have Karnal bunt. In a few cases, exports of U.S. wheat have been curtailed.

Question. Are we doing adequate public and private plant research now to get ahead of the Karnal Bunt problem? Are you intending to ask for more research dollars from this subcommittee to formulate short and long-term solutions to this problem?

Answer. Because Karnal bunt have been a quarantined disease in the U.S., research here has been limited to the ARS containment facility at Fort Detrick in Frederick, Maryland. In addition, cooperative research has been carried out with scientists in India and Mexico, where the disease is endemic. The ARS FY 1997 budget does not include an additional request to address the Karnal bunt problem. However, the agency plans to work closely with APHIS and the industry to identify critical research needs to solve the problem.

BUDGET FOR INTERNATIONAL PROGRAMS

Question. In presenting the President's budget for fiscal year 1997, you said that the Department would be "continuing the Administrations's strong commitment to export promotion by providing just under \$8 billion in program level for the international programs and activities in 1997". How does this \$8 billion break out by program.

Answer. The following table details our budget proposals for international programs and activities for fiscal year 1997.

International Programs and Activities Program Level (Dollars in Millions)	
Program	FY 1997 Budget
CCC Export Credit	
Short-term Guarantees (GSM-102)	\$5,000
(Supplier Credit Guarantees)	(250)
(Facilities Financing Guarantees)	(100)
Intermediate-term Guarantees (GSM-103)	<u>500</u>
Total, CCC Export Credit	5,500
Market Promotion Program	110
Export Enhancement Program	861
Dairy Export Incentive Program	67
Sunflower and Cottonseed Oil Assistance Programs	20
P.L. 480 Food Assistance	1,110
Food for Progress Program	115
FAS Salaries and Expenses a/	<u>80</u>
Total, International Programs	\$7,963

a/ The FAS program level includes funding of \$26 million for the Foreign Market Development Cooperator Program, as well as funding for other export promotion and market development activities of FAS, such as Agricultural Trade Offices, trade shows and missions, Cochran Fellowship Program, etc.

EXPANSION OF OVERSEAS OFFICES

Question. Further, you have requested an increase for an expansion in the agency's overseas office structure and its market development activities. Will the agricultural community have the opportunity to provide suggestions and comments on how you propose to expand these overseas activities?

Answer. These decisions are being taken in the context of the Department's Long-Term Agricultural Trade Strategy, which has been thoroughly disseminated to organizations in the agricultural community. FAS will be consulting informally with cooperator organizations and others about its specific office expansion plans during the next few weeks.

PRIVATE SECTOR INFORMATION SOURCES

Question. In maintaining a worldwide agricultural market intelligence and commodity reporting service, to what extent do you use U.S. private sector sources located in the 132 countries covered by the FAS?

Answer. U.S. and foreign private sector contacts are a key source of information for FAS commodity and market intelligence reporting. Private traders are often the best source of information, both on factors influencing current trade flows and on the practical details for foreign countries' rules governing agricultural trade. Agricultural Counselors and Attaches make a practice of meeting regularly with representatives of major U.S. trading companies, and with representatives of market development cooperator organizations in the countries where they have established a local presence.

IMPACT OF U.S. AGRICULTURAL EXPORTS ON FARM INCOME

Question. A USDA priority is enhancing the economic development of rural America by increasing agricultural exports and bolstering farm income. Does the Department have any analysis that demonstrates the linkage between exports and farm income on a bulk, intermediate, and high-value basis? In other words, what exports yield the highest returns to farmers and rural communities?

Answer. Yes, the Department tracks the impacts agricultural exports have on jobs and income. USDA's Economic Research Service regularly updates its input/output model of the U.S. economy that measures the economic activity triggered by agricultural trade. This model not only provides estimates on the impacts from total agricultural exports, it also separately calculates the impacts generated from bulk commodity and high-value product exports.

We know from this model that the farm share of total income from exports is higher for bulk commodities than for high-value products. The most recent figures indicate that farmers capture 42 percent of the total income generated by bulk exports, whereas this figure falls to 25 percent for high-value products. For all agricultural exports, the farmers' share of income from exports is 31 percent. High-value products differ from bulk commodities in that they are generally further processed or handled and stored in ways that add cost to the final sales price. When this happens the non-farm share of the final sales price is higher.

Having said this, however, I would like to make clear that most of the additional income from exports that has flowed into the pockets of farmers around the country over the past ten years--say from the mid-1980s to 1994--has not come from bulk exports. Instead, most of the additional income generated from exports has come through high-value products as their total sales value rose from \$11.9 billion in 1986 to \$25.5 billion in 1994. During the same period, bulk sales rose from \$14.5 billion to \$18.0 billion. In 1995 and 1996, the focus has returned to the bulk commodity markets as exports of these commodities have surged.

There is one other point I would like to address in responding to your question about the impact of U.S. agricultural exports on the economic well being of rural America --a point that goes beyond the question of farm income to the wider question of income generation in all the associated industries that are tied to the agricultural sector, in both rural and urban areas all across this country. ERS' input/output model estimates the additional business activity--or income--generated by rising agricultural exports. U.S. agricultural exports totaled \$54.1 billion in fiscal 1995, which in turn generated an additional \$74 billion in supporting activities, such as food processing, manufacturing, transportation, and other servicing like banking. Much of these supporting activities took place in rural areas, employing people in small towns all across America. If we break out this figure into its bulk and high-value portions, we know that the additional supporting activities generated by bulk exports reached a value of \$24 billion, while the figure for high-value products was \$50 billion.

MPP/MAP FUNDING

Question. The 1996 Farm Bill caps the Market Access Program (formerly MPP) at \$90 million. You have requested to fully fund MPP/MAP at \$110 million. Where do you propose the \$20 million difference be used?

Answer. The fiscal year 1997 budget was prepared prior to enactment of the new Farm Bill and assumed a continuation of the MPP program at the authorized level of \$110 million. Because the language in the new Bill provides that not more than \$90 million of CCC funds may be used to carry out the program in fiscal year 1997, we will need to adjust our program and budget assumptions to reflect the \$90 million level.

IMPACT OF ELIGIBILITY CRITERIA CHANGES IN 1996 APPROPRIATIONS BILL

Question. Since the fiscal year 1996 Agriculture Appropriations Bill changed the eligible criteria for the MPP, now MAP, were any groups excluded from participation? Was there any delay in implementing the fiscal year 1996 program? What does this mean for exports? Did we see a decline in exports because of the eligibility change?

Answer. As a result of provisions in the fiscal year 1996 Agriculture Appropriations Act, we have eliminated direct assistance through the Export Incentive Program for large for-profit corporations and foreign for-profit corporations. For example, the Department will no longer enter into direct agreements with Pillsbury, Dole, Fleming Foods, and Hunt-Wesson. However, these large-sized firms can still apply for funding through nonprofit trade or State regional trade groups. In addition, the 1996 Act prohibits MPP funding for mink trade associations and, therefore, no funding will be available for the U.S. Mink Development Council.

The target date for the 1996 program allocations was the end of March. However, it is expected that the announcement will be made in April. Although past the 1996 target date, the announcement will be earlier than the 1994 and 1995 announcements.

It will not be possible to evaluate the effects of the program eligibility changes until the program has been fully implemented.

DISTRIBUTOR DEVELOPMENT PROGRAM

Question. What is the "Distributor Development Program" and is the development of marketing strategies for specific groups of agricultural products the appropriate expenditure of government funds and resources?

Answer. The Distributor Development Program focuses on strategies pertaining to the development of in-country distributor networks, not on market development. The program's objective is to firmly establish distribution for U.S. foods in key emerging markets by using market research, buying missions and U.S. trade association promotions as part of a three-year integrated strategy. The program is integrated in that local traders learn more about U.S. foods, while U.S. exporters learn more about local market interests and buying practices. The Distributor Development Program is designed to get importers and exporters to work together to develop an effective in-country distribution system for U.S. food products. The use of government resources to develop marketing strategies for specific groups of agricultural products is an appropriate investment to combat efforts of our competition by developing effective distribution for U.S. foods in markets with strong export potential such as those in Latin America, and Asia.

Question. What types of agricultural products do you intend to promote under this program? Isn't this function best done through the States and private companies?

Answer. We intend to promote groups of products such as fresh produce and seafood which have particularly high potential in specific markets. For example, a strategy might be developed for fresh produce in Brazil and Argentina, or for food ingredients in Indonesia, Thailand and Malaysia. To avoid duplication with existing market development programs by industry organizations and regional State trading groups, the program would only be used for groups of commodities, such as produce, which are currently handled by more than one Market Promotion Program participant. The Distributor Development Program would take advantage of natural efficiencies in conducting market research and developing distribution for groups of products in the initial stages of market development. Once distribution has been established, further promotions would be handled by industry groups under the Market Promotion Program and with their own resources. However, transitional promotional funds would be provided for one year to encourage participants to develop cost-effective, jointly implemented strategies.

COMPETITIVENESS IN THE FOREIGN MARKET DEVELOPMENT PROGRAM

Question. In your statement you speak to "competitive basis" for awarding cooperator cost-share assistance in the Foreign Market Development Cooperator Program. How were awards made previous to fiscal year 1997? Why is this new?

Answer. We currently do not have a competitive process as a basis for awarding cost-share assistance in the Foreign Market Development (FMD) program. All eligible trade associations receive funds to enable them to maintain an overseas presence for export promotion and technical trade servicing. A substantial portion of FMD funding is used to support the costs of overseas rents and overhead expenses. Historically, FMD has promoted basic program crops as a long-term venture by providing a set budget from year to year, without annual competition. Periodic competition for funding of the cooperators was not pursued previously because funding had been sufficient to meet the needs of participating organizations. Further, because of the nature of the program, it was considered difficult to evaluate the relative net benefits of the different activities carried out under the program.

However, starting in 1998, all Federal programs must comply with the Government Performance and Results Act (GPRA). The GPRA will require programs to develop strategic plans with specific program goals and intermediate milestones. Performance measures will assess the program's effectiveness in achieving the broader goals and desired outcomes. Thus, the FMD program will need to display its effectiveness in increasing U.S. exports, and the efforts of the individual cooperators will be assessed.

FAS sees merit in adding a competitive process to the FMD program. One option we are considering is to "set aside" a certain percent of the available program funds which could be redistributed to Cooperators based on established criteria. The "set aside" funds would be used to stimulate new and creative marketing initiatives. Another option is to make the entire program subject to competition, although with long-term agreements after each competition.

NATIONAL RESEARCH INITIATIVE

Question. You have requested a \$33 million increase for competitive grants through the National Research Initiative and at the same time asked for a \$65 million reduction in the Cooperative State Research, Education and Extension Service (CSREES). How do you propose that this Subcommittee complete the severe backlog of CSREES building and facilities at our universities by requesting a \$65 million decrease in this account?

Answer. The Administration's budget recommendations for the Department reflects the importance we assign to investments in new

technology from all sources to address the major issues facing the agricultural community including pest management, food safety, protection and restoration of soil and water resources, methods for processing and new uses of agricultural products, and farm income and market competitiveness. The research under the National Research Initiative (NRI) will broaden the knowledge base available to U.S. agriculture and will enable the agricultural community to exploit new economic opportunities to meet the needs of society. Federal funding for this Initiative is critical because the knowledge base generated from this research is expected to yield local, regional, national, and international benefits through its advancement of agricultural biotechnology, creation of a safer food supply, and enhancement of the environment. In addition, the NRI supports vital long-term fundamental and mission-linked research unlikely to be supported by local, state, or private sources. The fact that NRI projects are competitively selected from proposals solicited from all potential performers, provides assurance that we are taking advantage of research investment opportunities that will have the greatest potential return to agriculture.

In relation to funding requests for university building and facilities projects, we believe that the current budget climate calls for making funding choices which best reflect national and international interests. Providing federal support for university facility projects that have not passed through a competitive selection process may not be the best use of our current resources. Since all of these facilities are of importance to local or state needs, funds may be available from local, state, or private sources.

The Department has proposed legislation to establish a competitive facilities grant program, and while it was not included in the recent farm bill, we continue to recommend it when Congress considers additional substantive legislation for research in USDA.

FUNDING FOR WAHKIAKUM COUNTY

Question. I have been contacted by the Wahkiakum County Conservation District in Cathlamet, Washington. According to Kimberley Smith, Program Coordinator, the Farm Service Agency has informed them that projected funding for Wahkiakum County has been reduced by 90 percent. Can you please have your aides look into this inquiry and if true, explain the reasons why this specific Conservation District was reduced by 90 percent?

Answer. I believe that your question refers to the Agricultural Conservation Program (ACP) Allocation to Wahkiakum County for FY 1996. Funds for the ACP are allocated to local Farm Service Agency offices soon after the beginning of the fiscal year, following enactment of appropriations. Allocations are made to States based on their proportional needs to address soil and water conservation problems. In turn the State determines the allocations to the counties. ACP allocation to the State of Washington and Wahkiakum County have been reduced by about 60 percent over the 1994-1996 period which is roughly the same proportion as the total funding reduction for ACP. We also understand that the State office in Washington change the allocation formula in 1996 to reflect the current trends in land use. Since the proportion of agricultural land to forestry land in Wahkiakum County is reduced from previous years, the ACP allocation was reduced from 1995 to 1996.

SALMON PURCHASE

Question. Does USDA intend to honor the commitment it made on March 8 to assist the canned salmon industry through a major purchase by the Agricultural Marketing Service? What level of purchase is anticipated for product packed in 1995? And for product from the '96 season?

Answer. In light of Senator Murkowski's proposal that would prohibit USDA from utilizing current quality inspection procedures

for canned salmon, we are reevaluating solicitation provisions and quality assurance factors used to purchase canned salmon for distribution through USDA food assistance programs. Any decision to purchase canned salmon subsequent to this reevaluation will be conditioned on the 1996 harvest and confirmation of the preliminary estimates provided in December 1995.

CANOLA RESEARCH

Question. It is noted that the Department has zeroed out funding for Canola Research in favor of "strategic materials." Could you explain the Department's position in regards to Canola Research?

Answer. The Department is administering funding for canola research under the Supplemental and Alternative Crops authority for the third year. This work has focused solely on crop production in six regions across the country. The Department is requesting funds under this authority for a comprehensive program of research and development of agricultural materials that are of strategic and industrial importance. The use of vegetable oils, including canola, for industrial product development and testing, as opposed to crop production only, is the major component of the proposed program.

MIAMI AGRICULTURAL TRADE OFFICE

Question. The Department proposes opening an Agricultural Trade Office in Miami, Florida to take advantage of the potential access to high-value food markets and the ease of transportation. Is FAS also willing to reexamine its foreign-only rule on the location of cooperator offices which service the Latin American and Caribbean markets?

Answer. FAS will consider the benefits and costs of locating cooperator offices in the Miami ATO to service the Latin American and Caribbean markets.

SANITARY/PHYTOSANITARY ISSUES

Question. During your testimony before this subcommittee, the Secretary noted that Sanitary/Phytosanitary issues would increasingly challenge U.S. agricultural access to markets. How does FAS plan to address this challenge?

Answer. Since mid-1995, FAS has conducted weekly interagency working level meetings on technical barriers to trade (TBTs), which include Sanitary/Phytosanitary and other non-health/safety related issues. These weekly meetings have greatly increased communication on key TBT issues affecting U.S. exports and solidified cooperative working relationships. Efforts to improve the operational aspects of addressing technical barriers to agricultural exports continue, particularly with regard to sharing information on a timely basis with key stakeholders. FAS implemented in 1996 an SPS tracking system to ensure 1) constant, consistent review of these issues within the working group; 2) identification of key contact points; 3) proper strategic emphasis on specific SPS issues; 4) forward planning for major meetings - both domestic and international.

Also in mid-1995, an initial inventory of TBTs was conducted in key agricultural export markets. This inventory is currently in the process of being updated for 1996 and expanded to all foreign agricultural markets.

Finally, FAS is in the process of increasing staff resources dedicated to responding to these important Sanitary and Phytosanitary issues. Additional personnel are being targeted to both the practical solving of current issues, but more importantly at coordinating longer-term inter-departmental strategies, involving among other things CODEX, biotechnology, the WTO SPS Committee, country specific approaches, etc.

FAS PRESENCE IN EUROPE

Question. For this subcommittee to fully understand the proposed expansion, consolidation and conversion of European Agricultural Trade Offices, could FAS account for its entire presence in Europe, including Eastern Europe and the former USSR? How does this compare with the private sector presence in these markets?

Answer. It is difficult to compare the distribution of FAS resources with that of private sector organizations, since private organizations usually emphasize a particular area of trade and select their locations accordingly. FAS attempts to represent a broad range of product and program interests throughout the region. In Eastern Europe, FAS provides oversight in relation to a number of credit, food assistance, and agricultural sector privatization programs, in addition to carrying out reporting and market promotion activities.

The existing Agricultural Trade Office in Hamburg and the proposed office in Milan will provide focused support for agricultural product promotion in northern and southern European regions, respectively. The Moscow ATO will support increased marketing activities throughout the Russian Republic, with marketing staff in St. Petersburg and Vladivostok. The proposed staff increase in Brussels recognizes the steady expansion of the role of the European Union in defining rules of market access in member states. The proposed staff increase in Geneva is designed to assure that the U.S. positions are forcefully presented in all meetings of the World Trade Organization.

The list of FAS offices now headed by an American officer follows, with proposed American staffing and area of responsibility increases and decreases in 1996 and 1997 indicated in parentheses.

Locations of Major FAS Offices in Europe

Austria, Vienna
 Belgium, Brussels, US Mission to the European Union (staff increase)
 Bulgaria, Sofia (staff decrease)
 Denmark, Copenhagen (staff decrease)
 France, Paris (staff decrease)
 Germany, Bonn
 Germany, Hamburg - Agricultural Trade Office (increased regional responsibility)
 Greece, Athens
 Italy, Milan (conversion to S. European Agricultural Trade Office)
 Italy, Rome
 Netherlands, The Hague (increased regional responsibility)
 Poland, Warsaw (increased regional responsibility)
 Russia, Moscow (staff increase - open Agricultural Trade Office)
 Spain, Madrid
 Sweden, Stockholm
 Switzerland, Geneva, World Trade Organization (staff increase)
 United Kingdom, London

In addition to the above offices which have American staff, FAS has foreign national employees located in U.S. embassies in Belgium, Czech Republic, Finland, Hungary, Ireland, Kazakhstan, Latvia, Norway, Portugal, Romania, Serbia-Montenegro, Switzerland, Ukraine, and Uzbekistan.

QUESTIONS SUBMITTED BY SENATOR BURNS

KARNAL BUNT

Question. Secretary Glickman, in recent weeks we have had a serious outbreak of Karnal Bunt in Arizona, and most recently in the state of Montana. What is being done by the Agriculture Department to address the concern that many of our trading partners have with this problem, and what is the current status of the fungus in the remainder of the United States?

Answer. At the beginning of the Karnal Bunt project, we traced infected seed to a storage facility in Montana. However, this seed was never planted. We disposed of the grain and disinfected the facility. Therefore, we don't see Montana as a problem area right now.

We have been in regular contact with our trading partners so that we address this situation effectively and minimize any trade repercussions. A total of 37 countries prohibit wheat from countries where Karnal Bunt occurs. Most of these countries are accepting our grain from areas with a declaration stating the shipment is from an area that is free of Karnal bunt.

APHIS is now conducting investigation, identification, and regulatory activities in Arizona, New Mexico, Texas, and California. Currently, we are surveying 40,000 acres of wheat in Arizona, 128,000 acres in California, 7,500 acres in New Mexico, and 500 acres in Texas. As you know, I recently issued crop destruction orders -- which will include compensation for crop losses -- for fields in New Mexico and Texas where contaminated seed was planted. We are developing protocols for compensating losses to the 40,000 acres in Arizona and infested wheat in certain areas of California. APHIS has allocated \$3 million for a national survey, which will involve sampling wheat elevators in each county in wheat producing states several times during the year. The survey will be used to verify to our trading partners that grain is from areas free of Karnal bunt.

RULE MAKING PROCEDURE

Question. In the coming weeks, with the approval of the conference report on the Agricultural Transition Act and the signature of the President, you and the Department will be working on the rule making procedure for several of the titles covered in this act. With this in mind, to what extent are you going to solicit comment from the public and from the agricultural community on the rules? What is the process that you would like to have people submit comment on the rule making procedure?

Answer. Section 161 requires regulations necessary to implement the Agricultural Market Transition Act (Title I of the Federal Agriculture and Reform Act of 1996) be issued within 90 days after the date of enactment and exempts this rulemaking from various regulatory requirements in order for the changes to be put in place as quickly as possible. Under these exemptions, we anticipate implementing the changes in the transition payment program, dairy and other commodity programs, crop insurance program, and administrative procedures through final rule making, rather than the customary procedure of advanced notice of proposed rule making with comment period followed by publication of the final rule. For the conservation, rural development, and other titles of the farm bill we will follow customary procedures and seek public comment in formulating final rules and procedures. However, the farm program provisions are long overdue. The exemption provided in the legislation will speed publication of the rules informing farmers of the program provisions they will be operating under. With planting season already here and with the statutory deadline of August 1 for signing the production flexibility contracts, it's imperative that the rules be issued as quickly as possible.

PROJECTED SPENDING

Question. I am very interested in the way that the Department of Agriculture has stated that the new farm programs will cost the government about \$3 billion more than what they would cost under the current programs. I find it amazing that the Department can make this assertion without knowledge of what the price of the commodities will be in the future. Would you please explain this to me?

Answer. Using projections of spending under the 1990 farm bill provisions for the Commodity Credit Corporation (CCC), outlays of the CCC are projected to total \$3.2 billion in 1996. Under provisions of the Agricultural Transition Act, CCC outlays are projected to total \$6.4 billion in 1996. Based on these estimates, spending in 1996 under the Agricultural Market Transition Act would be \$3.2 billion higher than spending would be if the 1990 farm bill provisions were extended.

Of course, projected spending under provisions of the 1990 Act, and under provisions of the Agricultural Market Transition Act to a lesser degree, are based on estimates of 1995 and 1996 crop prices and market conditions and are subject to change. As your question indicates, no one knows with certainty exactly what future commodity prices will be, or what tax revenues or budget deficits will be, for that matter. Commodity prices do fluctuate widely and even our best efforts to estimate future prices can miss the mark by a considerable margin.

Our concern that the transition payment program provides for an inadequate safety net recognizes that market conditions can change, crop prices can fall, and fixed contract payments may be insufficient protection against reduced market returns.

EPSCOR

Question. Last year, this subcommittee and the Congress directed that 10 percent of the NRI Competitive Grants funding go into USDA EPSCoR. How did you comply with this?

Answer. The purpose of the USDA EPSCoR program is to increase the amount of agricultural research at academic institutions within a set of states which have had limited success obtaining research funds from the USDA in a competitive process. To ensure that this program addresses the mission of USDA, proposals must relate to the research program areas of the National Research Initiative (NRI) Competitive Grants Program which address what have been identified as the critical issues facing agriculture today.

The USDA EPSCoR program has chosen to target funds to alleviate impediments that limit research capacity of individuals and institutions in USDA EPSCoR states. These include providing funds for: sabbatical leaves in order to provide an opportunity for faculty to enhance their research capabilities through Research Career Enhancement Awards; the purchase of research equipment to strengthen the research capacity of institutions funded through Equipment Grants; experimentation to collect preliminary data in preparation for applying for a standard research project funded through Seed Grants; and enhancement of research projects through Strengthening Standard Research Project Awards.

Each of the six NRI divisions (Natural Resources & the Environment; Nutrition, Food Quality & Health; Plant Systems; Animal Systems; Markets, Trade and Policy; New Products and Processes) allocate 10 percent of the funds received as payments to states for the Strengthening Awards Program. This program is a vehicle to assure that sufficient funds are granted to institutions in USDA EPSCoR states conducting agricultural research activities. USDA allows all academic institutions within an EPSCoR state to apply for this program, thus providing for wide participation of institutions.

The goals for amount of total funding for the Strengthening Awards program set by Congress are met through evaluation of proposals through a competitive peer review process. In FY 1995 two separate peer review panels, in addition to other 32 peer review panels convened for the review of Standard Research Grant applications, were assembled for the evaluation of Research Career Enhancement Awards, Equipment Grants, and Seed Grants. Strengthening Standard Research Project Award and Standard Research Grant applications were reviewed by the peer review panels in the appropriate NRI research program area.

Question. How did you designate eligible states for FY 1996? Will there be any change in the designations for FY 1997?

Answer. USDA EPSCoR States are those states which have had a funding level from the USDA NRICGP no higher than the 38th percentile of all states, based on a three-year rolling average of all U.S. territories and possessions, including the District of Columbia. For FY 1996, the three years used in the calculation of the average were 1992, 1993 and 1994. For FY 1997, the years included 1993, 1994 and 1995. Similar calculations are proposed for FY 1997 with minor changes.

Question. Please provide a list of the USDA-EPSCoR states and the amount of funding which each has received, by year, for FY 1993-95.

Answer. The information follows:

NRI Competitive Grants Program Funding for USDA EPSCOR States,

Total Funding for FY 1993-95

USDA EPSCOR States, FY 93,94,95*	FY 1993 <u>Total \$</u>	FY 1994 <u>Total \$</u>	FY1995 <u>Total \$</u>
Alaska	149,895	312,500	147,000
Arkansas	1,012,676	532,299	1,112,080
Connecticut	1,514,862	1,220,729	816,789
Delaware	650,490	368,406	1,187,004
Hawaii	439,378	313,807	665,000
Idaho	971,559	597,711	1,057,836
Maine	388,940	360,483	567,194
Mississippi	700,746	646,738	811,183
Montana	727,509	1,104,120	1,869,826
Nevada	220,052	606,647	906,923
New Hampshire	557,459	633,018	281,061
New Mexico	404,013	543,575	0
North Dakota	1,351,011	978,725	1,350,733
Rhode Island	484,318	744,256	253,500
South Carolina	851,301	725,862	825,641
South Dakota	529,453	437,230	468,083
Vermont	618,070	121,070	219,000
West Virginia	910,502	197,001	445,000
Wyoming	<u>579,429</u>	<u>571,853</u>	<u>154,998</u>
	<u>\$13,061,663</u>	<u>\$11,016,030</u>	<u>\$13,138,851</u>

U.S. Territories & Possessions

District of Columbia	323,920	157,000	188,778
Puerto Rico	0	130,000	0
	<u>\$13,385,583</u>	<u>\$11,303,030</u>	<u>\$13,138,851</u>

* The list of USDA EPSCOR States is identical from FY 1992-96.

Question. Please provide a list by state of all NRI amounts for FY 1995.

Answer. [The information follows.]

NRI Competitive Grants Program Funding By State, FY 1995

State		Total Funding \$
Alaska	AK	\$147,000
Alabama	AL	1,526,847
Arkansas	AR	1,112,080
Arizona	AZ	1,841,622
California	CA	10,563,250
Colorado	CO	2,276,040
Connecticut	CT	816,789
District of Columbia	DC	188,778
Delaware	DE	1,187,004
Florida	FL	3,318,564
Georgia	GA	1,824,233
Hawaii	HI	665,000
Iowa	IA	1,580,449
Idaho	ID	1,057,836
Illinois	IL	3,929,050
Indiana	IN	3,202,145
Kansas	KS	1,956,095
Kentucky	KY	1,124,044
Louisiana	LA	428,500
Massachusetts	MA	2,151,831
Maryland	MD	2,065,734
Maine	ME	567,194
Michigan	MI	2,741,000
Minnesota	MN	2,137,304
Missouri	MO	2,316,528
Mississippi	MS	811,183
Montana	MT	1,869,826
North Carolina	NC	3,614,770
North Dakota	ND	1,350,733
Nebraska	NE	1,585,927
New Hampshire	NH	281,061
New Jersey	NJ	1,907,151
New Mexico	NM	0
Nevada	NV	906,923
New York	NY	6,457,648
Ohio	OH	1,387,700
Oklahoma	OK	916,695
Oregon	OR	1,996,180
Pennsylvania	PA	2,279,467
Puerto Rico	PR	0
Rhode Island	RI	253,500
South Carolina	SC	825,641
South Dakota	SD	468,083
Tennessee	TN	987,993
Texas	TX	4,632,345
Utah	UT	634,000
Virginia	VA	2,005,455
Vermont	VT	219,000
Washington	WA	3,076,742
Wisconsin	WI	4,003,343
West Virginia	WV	445,000
Wyoming	WY	154,998
Total		<u>\$93,796,281</u>

Question. How are you seeing the Seed Grants help individuals to work their way into the mainstream of USDA funding?

Answer. Investigators who have been awarded seed grants cannot compete for another seed grant until 5 years later, but they can apply to our regular programs and still be eligible for Standard Strengthening Awards. This policy encourages them to work their way into the mainstream of USDA funding. We have seen EPSCoR seed grant

recipients apply to, and compete successfully, in our regular programs. For example, scientists in USDA-EPSCoR states from the University of Idaho, the University of Rhode Island, and the University of Connecticut were successful applicants.

Question. Are you seeing any new efforts at cross disciplinary research or other changes in competitive research in general?

Answer. In its annual program description the NRICGP encourages research carried on by multidisciplinary teams representing the biological, physical and social sciences wherever and whenever appropriate. Several research programs have observed increased attempts at the coordination of multi-disciplinary research in submission to the NRICGP. In FY 1995, across the 6 NRI divisions (Natural Resources & the Environment; Nutrition, Food Quality & Health; Plant Systems; Animal Systems; Markets, Trade and Policy; New Products and Processes) the NRI awarded more than \$24 million to multidisciplinary research projects.

One of the challenges of conducting cross disciplinary research is that such efforts often require larger monetary awards. This increase in cost results because multidisciplinary work often necessitates the coordination of multiple investigators across different academic departments, which in some cases can span different institutions. In addition, each investigator may work in systems where strict experimental control is more difficult to maintain. Some research will also need to be conducted under more costly field conditions, in contrast to setting up an ideal design to test a specific set of hypotheses in a laboratory.

An important role of the National Research Initiative Competitive Grants Program continues to be to open new areas of science and engineering with high relevance to U.S. agriculture. The Agricultural Systems Research program initiated in FY 1994 is one example of this effort and is cross disciplinary. Proposals to this program must clearly demonstrate the integration of systems components relevant to the research topic (e.g. physical, biological, environmental, social, economic, management). The panels rank proposals each year consist of social scientists, extension specialists, engineers, producer representation, as well as researchers representing the more traditional plant, animal, soil, and microbiological sciences.

The Agricultural Systems program is funded with 2%, or about \$1.75 million, of the annual funds awarded as grants from the NRICGP, funding between 8-10 projects each year. Selected projects are innovative in nature and as productive scientifically as other more narrowly focused programs.

Question. In FY 1994, some \$1.4 million of the NRI funding went into SBIRs. How much of this went to EPSCoR states? Please provide a breakdown by state of the amounts awarded in both FY 1994 and FY 1995.

Answer. In FY 1994, there were 60 Phase I grants and 23 Phase II grants awarded to companies representing 38 states. Of the total budget of \$7,291,755, 19.9% or \$1,451,012 was awarded to companies in 11 EPSCoR states. In FY 1995, there were 72 Phase I grant and 28 Phase II grants awarded to companies representing 32 states. The budget in FY 1995 was \$9,404,107 of which \$2,168,492 or 23.1% was awarded to companies in 9 EPSCoR states. A listing of awards to EPSCoR states is given below.

State	<u>FY 1994</u>	<u>FY 1995</u>
Alaska	----	\$ 52,613
Arkansas	200,000	----
Connecticut	270,000	233,000
Hawaii	50,000	198,000
Idaho	241,728	1,015,541

Mississippi	180,000	----
Montana	185,000	178,000
New Hampshire	50,000	218,000
New Mexico	145,000	----
North Dakota	50,000	108,192
South Carolina	49,984	----
South Dakota	49,300	110,000
Vermont	----	<u>54,931</u>
Total	<u>\$1,451,012</u>	<u>\$2,168,492</u>

[The FY 94 and FY 95 SBIR Awards by state follows:]

Cooperative State Research, Education and Extension Service

Small Business Innovative Research Program

Award Statistics Fiscal Year 1994

Phase I & II

<u>State</u> <u>Owned</u>	<u>Total No. Submitted</u>	<u>Amount</u>	<u>*M/D</u>	<u>Women</u>
AL	1	50,000	1	0
AR	1	200,000	0	0
AZ	1	50,000	0	0
CA	10	1,337,123	0	0
CO	2	250,000	0	0
CT	2	270,001	0	0
DC	1	50,000	0	0
FL	2	100,000	0	0
GA	1	180,000	0	1
HI	1	50,000	0	0
IA	1	50,000	0	0
ID	5	241,728	0	1
IL	4	500,000	0	0
IN	1	22,942	0	0
KS	2	93,716	0	0
LA	1	50,000	0	0
MA	5	530,000	0	0
MD	3	296,775	1	0
MI	5	250,000	1	0
MN	4	510,000	1	0
MS	1	180,000	0	0
MT	2	185,000	0	1
NC	1	125,000	0	0
ND	1	50,000	0	1
NH	1	50,000	0	0
NJ	2	99,197	0	0
NM	1	145,000	0	0
NY	2	275,000	0	0
OH	3	150,000	0	0
OK	1	50,000	0	0
OR	4	355,000	0	0
PA	1	50,000	0	0
SC	1	49,984	0	0
SD	1	49,300	0	0
TX	1	50,000	0	0
VA	2	100,000	0	1
WA	4	195,989	0	0
WI	<u>1</u>	<u>50,000</u>	<u>1</u>	<u>0</u>
Total	<u>83</u>	<u>\$7,291,755</u>	<u>5</u>	<u>5</u>

*M/D - Minority and Disadvantaged

Cooperative State Research, Education, and Extension Service
Education, and Extension Service
Small Business Innovative Research Program

Award Statistics Fiscal Year 1995
Phase I & II

<u>State</u> <u>Owned</u>	<u>Total No. Submitted</u>	<u>Amount</u>	<u>*M/D</u>	<u>Women</u>
AK	1	52,613	0	0
AZ	1	203,000	0	0
CA	11	1,059,476	1	1
CO	5	271,153	0	1
CT	2	233,000	0	0
FL	3	161,711	0	1
HI	1	198,000	0	0
IA	2	110,000	0	0
ID	7	1,015,541	0	1
IL	1	54,948	0	0
KS	2	416,000	0	0
LA	3	161,293	0	0
MA	7	797,389	0	0
MD	3	325,946	0	0
MI	6	468,155	3	2
MN	1	48,575	0	0
MT	1	178,000	0	0
NC	3	225,000	0	0
ND	2	108,192	0	0
NH	1	218,215	0	0
NY	4	261,582	0	2
OH	2	242,480	0	0
OK	3	316,069	0	0
OR	6	471,588	0	0
PA	5	430,896	0	0
SD	2	110,000	0	0
TN	2	232,900	0	0
TX	3	164,940	0	0
VA	3	486,000	0	1
VT	1	54,931	0	0
WA	3	161,514	0	0
<u>WI</u>	<u>3</u>	<u>165,000</u>	<u>2</u>	<u>0</u>
<u>Total</u>	<u>100</u>	<u>\$9,404,107</u>	<u>6</u>	<u>9</u>

*M/D - Minority and Disadvantaged

Question. Some agencies have made a special effort to help states with less participation in SBIR improve their participation and success rates. Has USDA done this?

Answer. Unlike most of the other SBIR programs, the USDA SBIR program has enjoyed considerable success with smaller states that traditionally have not done well in competing for Federal R&D funds. There is not any special effort directed at smaller states other than participation in state meetings when requested and site visits to grantees in these states whenever possible. Given that the EPSCoR states received 19.9% and 23.1% of the USDA SBIR funds in FY 1994 and FY 1995, respectively, USDA feels there is no need for additional special efforts to help these states.

Question. Does USDA have an STTR effort?

Answer. The Small Business Technology Transfer Research Pilot Program (STTR) was set up as a three year pilot program. Unlike the SBIR program where the threshold for participation is \$100 million of extramural R&D, in the STTR program the threshold is \$1 billion of extramural R&D. Only the five largest SBIR agencies (DOD, HHS, NASA, DOE and NSF) meet this threshold requirement and thus they are the only agencies at present that have an STTR program.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

CIVIL RIGHTS COMPLAINT PROCESSING

The budget request includes an increase of \$216,000 for the Office of Civil Rights to a level of \$10,274,000. This level will provide for 162 FTE's, a number unchanged from FY 96.

The budget justifications indicate 385 complaints were received in FY 1995 and 230 cases were closed. The materials don't note how old the 320 closed cases were. The following facts outline a case reported to my office that indicates serious delay in some of these cases.

- June 15, 1992. Johnny and Karen Gutierrez applied for a farm ownership and operation loan through the Hempstead County, Arkansas Farmers Home Administration office under the authorities of the Socially Disadvantaged Program.
- September 25, 1992. The loan was disapproved by the county office based on inadequate cash-flow.
- November 18, 1992. The Gutierrezs appealed this decision which was reversed by the National Appeals Division (NAD) on November 18, 1992. NAD directed the county office to proceed with the loan based on proper agency instructions.
- February 13, 1993. The agency did not proceed as instructed and the Gutierrezs filed a discrimination complaint.
- June 22, 1993. The agency conducted a preliminary inquiry through its civil rights office in Little Rock.
- October 1995. Nothing happened and the Gutierrez's contacted the offices of Senators Bumpers and Pryor who in turn wrote letters to Robert Franco, Associate Deputy Director for Civil Rights at USDA in Washington.
- December 6, 1995. Senator Bumpers received a response from Robert Franco which indicated a draft decision was complete and a final decision should be issued before the end of December.
- Early March 1996. No decision was issued. Robert Franco gave verbal assurance to Senator Bumper's staff that a decision would be issued by March 11.
- March 20, 1996. Senator Pryor wrote Secretary Glickman that no action had been taken. Similar letter from Senator Bumpers was sent on March 21.
- March 25, 1996. Senator Pryor's staff discussed the problem with Robert Franco. Mr Franco said they were now looking at new information. He further indicated that if they found there was a likelihood of discrimination, they would then have to submit the file to OGC for review.

I am told this case has dragged on so long that one employee of the office in question has retired and another one has died. At the rate things are going, even if there was no actual discrimination, once this case is ready for formal proceedings, the agency will have no witnesses left to rebut the complaint.

Question: Would you please provide information relating to this case, the reasons for delay, and the extent to which this is a common problem to other civil rights complaints?

Answer: In 1995, the Department received 753 program complaints and resolved 490. We have substantially reduced the

average processing time of complaints over the past 3 years. While we have improved timeliness of current complaints, and we are continuing to improve the quality of our inquiries and decisions, the backlog of old complaints still necessitates unceasing efforts.

The Gutierrez case is a regrettable example. This complaint was filed with the program agency on February 9, 1993. The agency initiated an inquiry and informed OCRE about the complaint on April 26, 1993. The case was assigned to a specialist in September 1993. The agency completed the preliminary inquiry and sent the inquiry report, analysis, and recommendations to OCRE on August 23, 1994.

The specialist submitted a draft decision on November 29, 1994. However, the Chief of the Program Complaints Division left the agency and there was a succession of staff placed in an acting capacity, which caused a delay in processing complaints. A permanent supervisor was appointed on September 17, 1995, and a new reporting format and analytical framework were established.

In December 1995, a new draft decision was prepared. The senior specialist assigned to review the case discovered serious deficiencies in the original inquiry. Therefore, additional information was recently requested from the agency. We have completed our analysis and the final decision on this case will be issued by May 31, 1996.

While we were gathering the information needed to issue a correct decision, the new Civil Rights Enforcement Agency -- CREA -- contacted the agency and instructed it to implement the necessary corrective actions in this case. I apologize for the delay, and make a commitment to eliminate such incidents in the future.

CROP INSURANCE COVERAGE

Question. Mr. Secretary, you stated that half of the 80% crop insurance coverage came through private insurers. For last years crop, there was a requirement to purchase, at least, catastrophic coverage in order to participate in USDA programs. To what extent do you believe there would have been coverage absent the requirement for USDA program participation?

Answer. The biggest difference would at the catastrophic level of coverage. About \$425 million in business was done at this level on the 1995 crop. It is possible that a substantial portion of this business, perhaps as much as 25-30% of it, would not have been done absent the mandatory linkage requirement which, as you know, is up for repeal in the 1995 Farm Bill currently pending in Congress. But, it is important to note that catastrophic coverage is premium-free: producers only need to pay a small processing fee to obtain it. So, there is reason to believe that most of the producers who obtained catastrophic coverage last year would remain in the program absent the requirement. For higher, optional levels of coverage, the linkage requirement appears to have had little, if any, affect on most producers' decisions to purchase such coverage. About \$1.1 billion in business was done on such coverage in 1995, which compares to just under a \$1 billion in business in 1994 prior to the reform. There were about 103,000 acres insured at the higher, optional coverage levels in 1995 compared to about 100,000 insured acres in 1994.

Question. I agree that we should take whatever steps are necessary to increase farmer participation in crop insurance since the likelihood of future ad hoc disaster programs are very slight. Still, I hear from farmers in Arkansas that the cost of premiums for the coverage provided does not make economic sense. What can be done to make crop insurance more attractive to parts of the country where the cost of coverage is high and the coverage itself is minimum?

Answer. The law requires that the crop insurance program be actuarial sound which means that the level of risk must be reflected in the premium rate structure. The Department will continue to do everything possible to ensure that the rate structure is fair from area to area and crop to crop. But, this is a matter of equity and will not help reduce rates in high risk areas. What can be done in those areas is to ensure that the best possible insurance product is made available to producers. This includes seeing that the terms and conditions of policies are appropriate and that administrative costs are kept to a minimum. In large measure, this is a task for the private sector, although the Department encourages private insurers to be innovative and to compete for business. Producers can help too by providing data on their actual production history to ensure that the level of their guarantee is correct. Further, increased participation can help spread the risk and, thus, reduce rates. Finally, I would note that catastrophic coverage, while limited to 50% of production at 60% of price, is available at no premium charge to the producer.

Question. You mentioned the administration's continued support for dual delivery of crop insurance. I have heard from private sector insurers who feel they can provide the coverage and relieve USDA employees of yet another task to perform. As long as an area has access to crop insurance, why should we require USDA offices to offer crop insurance when local sector agents can perform that duty?

Answer. The reasons USDA offices have been used to help deliver the crop insurance program are, first, to encourage the widest possible participation, and, second, to provide a convenient service to producers who have been required to obtain at least the catastrophic level of coverage. The 1995 Farm Bill pending in Congress would eliminate USDA delivery except in those areas where there is not sufficient coverage by private insurers. There is, of course, a difference between having the widest possible participation in the program, and what may be deemed "sufficient" coverage by private insurers. The legislation would not, however, impede the Department's efforts to encourage producers, through outreach and extension, to participate in the program.

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

SUGAR CANE RESEARCH

Last year streamlining efforts were taken to transfer the land and facilities of the Houma ARS Sugarcane Research facility to the American Sugar Cane League and continue limited ARS research at this facility as a satellite of the Southern Regional Research Center in New Orleans.

Question. What is the status of this issue?

Answer. In October, 1995, the President signed the appropriations bill which provided for the transfer of all real and personal property assets of the Sugarcane Research Laboratory at Houma, Louisiana, to the American Sugar Cane League Foundation, a private entity. At the same time, the Laboratory would become a worksite of the Southern Regional Research Center. ARS is currently negotiating a long-term agreement with the Foundation to lease back the personal property and complete transfer of the real property to the Foundation.

Question. Is funding included in the FY 1997 budget to maintain scientific staff at this facility?

Answer.

Funding of \$1,245,700 is included in the fiscal year 1997 budget to maintain ARS scientific staff at the Houma facility.

Question. What level of funding is included in the budget to fund additional ARS sugarcane research at the Canal Point station in Florida?

Answer. Fiscal year 1997 funding for the Sugarcane Production Research Laboratory at Canal Point, Florida, amounts to \$1,708,900. This proposed funding level includes a proposed increase of \$900,000 for the South Florida Everglades Ecosystem Initiative and a reduction of \$133,200 for termination of a less critical, lower priority research project. The South Florida Task Force has determined that research is needed to identify new varieties of sugarcane that can be produced under high water table conditions and to develop agricultural practices that control soil subsidence.

Question. Does this amount represent an increase or decrease compared to the FY 1996 level?

Answer. This amount represents a net increase of \$766,800 in fiscal year 1997 over the fiscal year 1996 funding level.

LOWER DELTA HUMAN NUTRITION INTERVENTION

For the past two fiscal years, the Congress has supported funding for the Lower Mississippi Delta Human Nutrition Initiative, an exciting multi-state/multi-year nutrition research project involving LSU Pennington Biomedical based on recommendations of the Lower Mississippi Delta Development Commission chaired by President Clinton.

Question. What is the status of this research initiative?

Answer. The initiative is well on its way toward the goal of developing appropriate strategies to impact public acceptance of more positive changes in individual dietary habits. Related issues were addressed in an opening planning conference in April 1995. In this first year of the initiative participants have:

- created a team among 7 disparate institutions of widely different perspectives and established an organizational working structure;
- collected and organized all relevant existing information on regional ecology and sociodemographics, community resources, health and nutritional status demographics, and food security and accessibility into a monograph to be published in the summer of 1996;
- held two symposia with internationally renowned experts on community intervention and dietary assessment;
- established criteria for community selection used by the State institutions to identify the 10-15 communities within each of the three States from which the final set of communities will be chosen;
- disseminated to all institutions the first draft of the research design.

Question. As I understand, \$2.4 million is included in the President's FY 96 Budget to begin field studies next year. Is this amount sufficient to fund the scheduled planning and field studies during the coming year? If not, how much will be needed?

Answer. Fiscal year 1996 funding is sufficient to conduct community assessments and to plan dietary and biological assessments of Delta residents. The Steering Committee will continue to address needs for future research enhancement.

Question. Has a budget been established for this project over the next five years? If so, what research activities are planned and what level of funding will be needed?

Answer. The desired budget is an increase of \$2 million per year on an incremental basis for a 5 year period. At these higher levels we would allow longitudinal studies of selected sub-population groups of Delta residents and testing of carefully designed and sustainable interventions with residents who are at-risk. This will enable researchers to assess a variety of nutritionally-related health outcomes related to the specified group.

RICE RESEARCH

Question. Given the problems the rice industry faces linked to microclimate and pest/disease problems which affect quality and yield, what is the status of this and other important research efforts in Louisiana and other states?

Answer. ARS is conducting entomology research at Crowley, Louisiana; pathology research at Beaumont, Texas; and weed control research at Stuttgart, Arkansas. Additionally, ARS scientists have close working relationships with university scientists addressing problems relating to biotic and abiotic stress.

Question. It is my understanding that there is a rice quality research position at the ARS rice research station in Beaumont, Texas, that has not been filled as a result of the retirement of Dr. Webb. Will this important position that focuses on specialty markets be filled?

Answer. Sufficient funds are not available in the management unit to backfill this position at the present time. ARS recognizes the importance of rice quality research that focuses on specialty markets and will explore all options for future staffing of this important position.

QUESTION SUBMITTED BY SENATOR KOHL

STATE TRADING ENTERPRISES

Question. Mr. Secretary, on the issue of international trade, we have exchanged correspondence about our mutual concerns about the activities of the monopoly state trading enterprises, such as the New Zealand Dairy Board and the Canadian Wheat Board, and some of the unfair trade advantages that those groups have in the world market. In the post-Uruguay Round world I believe that this issue is going to be very crucial as to whether or not U.S. producers gain access to international markets. In your letters to me, you have indicated that you share my concerns about this. Given the growing importance of this matter, I was wondering if you would be willing to sit down with representatives of the affected wheat and dairy industries to discuss this matter further. I think it would be helpful for you to hear their concerns.

Answer. We have regular consultations with private sector advisors through our agricultural policy and technical advisory committees. These discussions have frequently included the topic of state trading boards. The dairy sector, in particular, has described its concerns extensively to the Department in letters and in testimony at a public hearing in March 1995. In addition, there are a number of studies of these organizations currently being conducted, including one by the GAO and another by the WTO Working Group on State Trading Enterprises, where the United States is seeking to obtain greater transparency in the operation of these boards. Of course, if there are new developments or information on this topic I would welcome hearing from the affected industries.

QUESTION SUBMITTED BY SENATOR MIKULSKI

SHORTFALL OF SUGAR SUPPLIES

Question. A month ago, because of the pending shortfall of sugar supplies (and therefore, continuing upward pressure on prices), you authorized a quota increase of 400,000 tons. This increase appeared to have had little impact on price which is now even higher, having moved from 22.55 cents per pound just prior to the November quota increase to 23.19 cents per pound.

It's clear that, after having increased the quota 700,000 tons since November, the Department still has failed to bring the price of sugar under control. The price squeeze is a further threat to the cane refining industry which has closed half its refining facilities over the past decade with a correspondingly heavy loss in employment.

Mr. Secretary, don't these circumstances justify an additional increase in sugar quotas and what steps do you plan to take in this direction?

Answer. We are very aware of the current supply and demand conditions with respect to sugar and have the situation under review. Should we believe conditions warrant, we are prepared to consider a further increase in the tariff-rate quota this fiscal year. We fully understand the conditions faced by the domestic cane refining industry and are sensitive to their concerns.

SUBCOMMITTEE RECESS

Senator COCHRAN. The next hearing of this subcommittee will be on Thursday, March 28, at 10 a.m. in room SD-138 of the Dirksen Senate Office Building. We will hear from USDA witnesses on the fiscal year 1997 budget request for the Department's Food Safety and Inspection Service and marketing and regulatory programs.

Until then, the subcommittee stands in recess.

Secretary GLICKMAN. Can I just say one thing?

Senator COCHRAN. Mr. Secretary, of course.

Secretary GLICKMAN. We have appreciated very much working with your committee. We note that ours was one of the earliest bills passed. For the most part, other than the Forest Service which was in another bill, our agency has experienced no work stoppages. I believe that to a large extent that has had to do with the good, positive, cooperative bipartisan relationship that we have had with you and your committee and we appreciate that.

Senator COCHRAN. Well, I appreciate your comments. We will continue to work hard to get an early decision on the agricultural appropriations bill. It surely was nice not to be shut down with all the rest of the Departments of Government for failure to get an appropriations bill passed. We will try to repeat that performance this year by getting early action on our bill. Thank you very much for your help in that effort.

[Whereupon, at 3:48 p.m., Tuesday, March 26, the subcommittee was recessed, to reconvene at 11:07 a.m., Thursday, March 28.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

THURSDAY, MARCH 28, 1996

**U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.**

The subcommittee met at 11:07 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Burns, Bumpers, and Kerrey.

DEPARTMENT OF AGRICULTURE

STATEMENTS OF:

**MICHAEL R. TAYLOR, ACTING UNDER SECRETARY, FOOD SAFETY
MICHAEL DUNN, ASSISTANT SECRETARY, MARKETING AND REGU-
LATORY PROGRAMS**

**ACCOMPANIED BY DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF
BUDGET AND PROGRAM ANALYSIS**

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

STATEMENT OF LONNIE J. KING, ADMINISTRATOR

AGRICULTURAL MARKETING SERVICE

STATEMENT OF LON S. HATAMIYA, ADMINISTRATOR

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

STATEMENT OF JAMES R. BAKER, ADMINISTRATOR

OPENING REMARKS

Senator BUMPERS [presiding]. Senator Cochran is in another hearing this morning that he is also chairing. He is a very important person. He is supposed to chair two hearings at the same time. And he will be here shortly, I guess. But we will get this hearing started.

We want to review this morning the budget request of the Food Safety and Inspection Service, the Animal and Plant Health Inspection Service, the Agricultural Marketing Service, and the Grain Inspection, Packers and Stockyards Administration.

Our witnesses are Mr. Michael Taylor, Acting Under Secretary for Food Safety; Michael Dunn, Assistant Secretary for Marketing and Regulatory Programs; Lonnie J. King, Administrator of the Animal and Plant Health Inspection Service; Mr. Lon S. Hatamiya,

the Administrator of the Agricultural Marketing Service; James R. Baker, Administrator, Grain Inspection, Packers and Stockyards Administration; and Dennis Kaplan with Department's Office of Budget and Program Analysis.

Gentlemen, we have your written testimony, and it will be made a part of the record. We would appreciate it if you could summarize your testimony and the answers to expedite this, it will give me a chance to go to the floor and tell everybody why I am against that farm bill before we vote on it.

With that, Mr. Taylor, let me ask you to lead off, please.

STATEMENT OF MICHAEL R. TAYLOR

Mr. TAYLOR. Thank you, Mr. Chairman. I am pleased to be before you today to discuss the President's 1997 budget request for the Food Safety and Inspection Service.

FOOD SAFETY MISSION

Mr. Chairman, our agency is strongly committed to its mission of ensuring that the Nation's meat, poultry, and egg products are safe, wholesome, and accurately labeled.

We are proud of the very significant contributions our current inspection program makes to food safety and consumer protection.

AGENDA FOR CHANGE

We are equally conscious, Mr. Chairman, of the need for a fundamental change in our program to better protect public health and to fully satisfy legitimate public expectations regarding food safety.

We must overhaul our regulatory program to deal more effectively with the problem of pathogenic microorganisms on raw meat and poultry products.

We must modernize the traditional deployment and utilization of FSIS resources to better target the most significant food safety hazards and to address hazards that arise not only within the FSIS-inspected establishments, but throughout the food safety continuum from farm-to-table. We must be as efficient as possible in carrying out the agency's food safety and consumer protection mission.

In a moment, Mr. Chairman, I will outline the aggressive actions we are taking to bring about the necessary change in our program.

I want to stress at the outset, however, that we are in a period of transition, in a period of enormous challenge and strain for FSIS. We must meet our legal obligations and our obligations to the public to operate the current system effectively and credibly, even as we work to design and implement the system of the future.

Our budget request for fiscal year 1997 is designed to meet this dual challenge. It would provide the funds we need to operate the current program, which includes avoiding further erosion in the number of inspectors available to cover a growing industry.

And it would provide, also, the funds we need to improve food safety and prepare for the future.

Mr. Chairman, we cannot cling to the status quo. I know the difficulty your subcommittee faces in today's tough budget environ-

ment. But without the funds we request to support our modernization initiatives, our program will be stuck in the past.

I know that you and this committee, Mr. Chairman, agree that the success of our program is too important to the public and to the industry we regulate to let that happen.

By acting positively on this year's FSIS budget request, this committee will begin the process of delivering to American consumers, American taxpayers, and the American meat and poultry industry the modernized food safety system they demand and deserve.

FOOD SAFETY INITIATIVES

Let me now briefly review our modernization initiatives. First, FSIS is finalizing its pathogen reduction and HACCP rulemaking proposal and is preparing to phase in this new food safety system.

HACCP-based process control coupled with appropriate performance standards and microbial testing will respond strongly to the problem of harmful bacteria on raw meat and poultry products, and it will provide the framework within which we can make much better use of our inspection resources.

Second, to make HACCP work and to ensure that our HACCP regulations are not simply layered on top of outdated regulations, we are overhauling our existing FSIS regulations.

Our goal is to convert our regulations as much as possible from command and control prescriptions to performance standards and to eliminate some current regulatory requirements that we believe result in an inefficient use of both public and private resources.

Third, we are planning a sweeping reorganization to improve our efficiency and prepare FSIS to implement a modernized, HACCP-based system of inspection. We cannot successfully operate our new food safety system with an outdated and inefficient organizational structure.

Finally, we will soon begin a public process to explore fundamental changes in how we deploy our inspection resources. Under the current system, a large percentage of FSIS inspection resources are devoted to tasks that do not necessarily provide the agency with the greatest possible return in terms of public health protection.

We believe that by redesigning the inspection process itself, we can successfully meet our current statutory obligations and objectives, as well as implement HACCP in our farm-to-table strategy within current overall staffing levels.

COMMITMENT TO INSPECTIONAL OVERSIGHT

I want to stress that as we explore alternative inspection models, we remain committed to rigorous inspection oversight, which we consider essential to the success of HACCP and to maintaining public confidence in meat and poultry products.

Our goal is not to reduce our frontline work force, but rather to redeploy them within plants and into more productive roles at other points along the farm-to-table chain.

I also want to emphasize again, Mr. Chairman, that as we plan for the future, FSIS takes its current inspection responsibilities very seriously.

We are making every effort in the current fiscal year and in our request for next year to maintain the current program even as we make necessary investments in program improvements.

The measures we have taken this year include the continuation of a freeze on noninplant hiring, restrictions on travel, and other nonpayroll operating expenses, and giving a high priority in the management of inspection resources to tasks involving higher risk activities and to meeting our mandatory inspection obligations in slaughter plants.

While these steps will help alleviate the spot inspection shortages FSIS is experiencing, maintaining the current level of inspection service throughout the balance of the current year and preparing our program for the future will require more than FSIS can deliver with available funds.

That is why we have requested a 1996 supplemental appropriation of \$9.5 million to ensure adequate inplant staffing levels and to begin making the necessary investments in inspection modernization.

Senator COCHRAN [presiding]. Dr. King.

Mr. TAYLOR. May I continue?

Senator COCHRAN. I am sorry. I thought you were finished, sir.

1997 BUDGET REQUEST

Mr. TAYLOR. Good morning, Mr. Chairman.

Let me now return to our budget request briefly for fiscal year 1997. This request reflects again our conviction that we cannot just maintain the status quo, we must progress. And 1997 is a critical year of transition.

During 1997, we plan to continue training our field force in HACCP and related techniques and to upgrade inspection positions to support their redeployment to more complex food safety activities.

We will also prepare our laboratories and laboratory personnel for the increased number of microbiological analyses that will be performed under the new performance-based food safety system with its enhanced focus on harmful bacteria.

We will adapt new technologies to improve food safety inspection and foster new food safety technologies, including cost-effective alternatives for small plants that will accomplish the same objectives as technologies designed for larger operations.

We will continue the regulatory reform initiatives that began in 1996. We plan to complete our reorganization at headquarters, and we will begin implementing the reorganization in the field.

During 1997, we will continue pilot testing of alternative methods of inspection and, based on these pilots, begin to make the needed changes in our inspection program to coincide with the implementation of HACCP.

To accomplish our goals for fiscal year 1997, Mr. Chairman, we are making a current-law request of \$574 million, which is \$21 million less than the request for fiscal year 1996.

The request reflects our emphasis on making better use of our current resources. It also includes \$16.8 million in increases above what has been appropriated for 1996 to cover the investments that I outlined above, including HACCP and related training, upgrading

and redeploying inspectors, and the science and technology that are required for the HACCP-based system of the future.

Mr. Chairman, we consider these investments to be the budgetary key to our agency's future success.

You will note that our fiscal year 1997 budget request does not include funding to hire additional inspectors beyond the proposed 1996 supplemental level.

As I noted earlier, fiscal year 1997 will be a transition year for FSIS, a year in which the agency will hold overall staffing level and prepare to deploy existing resources in accordance with the science-based, farm-to-table strategy.

Mr. Chairman, we have in place a long-term strategy that we believe will move FSIS to its ultimate goal, which is to implement a HACCP-based system and redeploy FSIS resources to more broadly and more effectively address food safety hazards.

With the support and leadership of this committee, we will have completed, by the beginning of the next decade, the transition to a system of food safety protection that will truly work better to ensure food safety, will make better use of our scarce resources, and will earn the support and confidence of the public.

We look forward to working with you and the members of this committee as we manage this difficult, but very necessary, transition to a system that will work better for the American people.

Again, I appreciate the chance to be here, Mr. Chairman, and I look forward to your questions.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Mr. Taylor. I understand the other witnesses have statements. We have accepted those, and they will all be made a part of the record. Then we will have an opportunity to discuss with each of you the questions that we might have.

[The statements follow:]

PREPARED STATEMENT OF MICHAEL R. TAYLOR

Mr. Chairman and Members of the Subcommittee, I am pleased to appear before you today to present the fiscal year 1997 budget request for the Food Safety and Inspection Service (FSIS).

CURRENT INSPECTION ACTIVITIES

The meat and poultry inspection program has a long, proud history of protecting the public health. Our mission is to ensure that the Nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and accurately labeled, as required by the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act.

FSIS inspects approximately 6,400 plants that slaughter cattle, swine, sheep, goats, horses, chickens, and turkeys, as well as produce approximately 250,000 different processed products, including hams, sausage, stews, pizzas, and frozen dinners. The products regulated by FSIS account for a third of consumer spending for food, with an annual retail value of \$210 billion.

In addition to inspecting animals before and after slaughter and during processing, our inspectors provide samples to laboratories to test for the presence of violative drug and chemical residues. FSIS also sets standards for a range of activities associated with the production of meat and poultry products, including the use of equipment, sanitation procedures, and product labeling.

In fiscal year 1995, our domestic inspectors examined approximately 85 billion pounds of meat and poultry and 3 billion pounds of egg products for public consumption. While the inspection of domestically produced meat, poultry, and egg products

consumes the bulk of FSIS resources, FSIS also recognizes the vital importance of inspecting imported products. To ensure the safety of imported products, FSIS maintains a comprehensive system of import controls to carry out the requirements of the Federal meat, poultry, and egg inspection laws.

The system of import controls involves two major activities. The first is oversight to ensure that exporting countries have inspection controls at least equivalent to those of the United States. Such countries must undergo a rigorous review process before they can become eligible to export product to the United States, and periodic reviews are carried out to maintain such eligibility.

The second component of the import control program is the reinspection, on a sample basis, of meat and poultry products as they enter the United States. Reinspection is a check to make sure that the foreign country's inspection system is working. This reinspection is carried out by approximately 74 import inspectors covering approximately 160 active import inspection locations. In 1995, approximately 2 billion pounds of imported meat and poultry products were passed for entry into the United States.

FSIS also provides assistance to State inspection programs and reviews those programs to ensure that they are maintaining inspection requirements at least equal to those of the Federal program.

Another part of the FSIS food safety program involves laboratory analysis, which provides scientific and technical support to inspectors through laboratory testing for chemical and antibiotic residues, microbiological contamination, pathology diagnostics, processed product composition, and economic adulteration.

FSIS currently operates three multidisciplinary laboratories and accredits approximately 200 private laboratories to carry out food safety and composition tests. During fiscal year 1995, over 2 million analyses were performed on meat, poultry, and egg product samples by federally operated laboratories.

FSIS also conducts compliance and enforcement activities to address situations where unsafe, unwholesome, and inaccurately labeled products have been marketed. FSIS investigates cases of administrative, civil, or criminal violation of meat and poultry regulations and works in conjunction with the USDA Office of the General Counsel and the Department of Justice to correct violative problems and prosecute offenders, if necessary.

In fiscal year 1995, 37,902 compliance reviews were conducted. As a result of these reviews and other compliance activities, 10 million pounds of meat and poultry were detained for noncompliance with meat and poultry laws. Forty-six recalls were conducted involving over 2.9 million pounds of product. In addition, 15 convictions were obtained against firms and individuals for violations of the meat and poultry inspection laws.

During fiscal year 1995, the Agency also completed its 1,000 Plant Review, which prompted FSIS to tighten application of enforcement measures and develop concepts to be applied in future regulatory settings. Of the 1,014 plants reviewed during this effort, 129 were issued Accelerated Deficiency Notices citing serious control problems. FSIS required immediate corrections for the serious deficiencies in these plants and directed them to develop and follow action plans to prevent deficiencies in the future. In addition, field inspection managers assessed the plants to determine whether Progressive Enforcement Action should be implemented or strengthened.

NEED FOR CHANGE

While the current program makes very significant contributions to food safety and consumer protection, there are two areas in which major improvement is needed to protect public health and satisfy legitimate public expectations regarding our program.

First, the current system does not deal adequately with the problem of pathogenic microorganisms (harmful bacteria) on raw meat and poultry products. Bacteria such as *Salmonella*, *E. coli* O157:H7, *Campylobacter*, and *Listeria monocytogenes* contribute significantly to the burden of foodborne illness in the United States. The current system does not directly target and systematically reduce harmful bacteria on raw product, nor does the current system equip FSIS inspectors with the scientific and regulatory tools they need to ensure slaughter establishments are meeting an acceptable standard of food safety performance with respect to such bacteria.

Second, the traditional deployment and utilization of FSIS resources is not optimal in light of our current food safety priorities. Food safety problems arise not only within FSIS-inspected establishments, but throughout the food safety continuum from farm-to-table. We recognize our responsibility to make the best possible use of

FSIS resources to carry out the Agency's food safety and consumer protection mission.

We believe these two problems—pathogen control and resource utilization—require fundamental change in our program. Such change has been recommended over the past decade by the National Academy of Sciences, the General Accounting Office, and other Agencies. The time has come to overhaul our regulatory program for meat and poultry and modernize the deployment of our resources.

I am pleased to report to you, Mr. Chairman, that we have in place a strategy, and we are aggressively taking the necessary actions to achieve these objectives. While fiscal year 1996 is a pivotal year for FSIS in terms of presenting a comprehensive strategy for change to the public, soliciting extensive public input on our proposals, and beginning the regulatory and other steps needed to put the strategy in place, fiscal year 1997 will be a critical year of transition as we further develop and begin to implement fundamental change. Let me review our strategy for change and the actions we are taking to achieve it.

STRATEGY FOR CHANGE

Our strategy for change encompasses five major initiatives: (1) rulemaking on Pathogen Reduction and HACCP, (2) regulatory reform initiatives, (3) a reorganization plan, (4) pilot tests of new approaches to inspection, and (5) farm-to-table food safety activities.

The strategy begins with our Pathogen Reduction and HACCP (Hazard Analysis and Critical Control Points) rulemaking proposals, which were published February 3, 1995, and which are now in the process of being finalized. Our HACCP rulemaking provides the framework for significantly improving food safety by incorporating science-based preventive controls into industry production processes and achieving an acceptable level of food safety performance with respect to harmful bacteria.

During the past year, we have had the benefit of extensive public comment and productive dialogue between FSIS and interested parties on the many policy and technical issues involved in the reform of meat and poultry inspection, and we are addressing a number of concerns that were raised by industry and others.

While there were a number of concerns raised, I believe we all share the consensus view of the scientific community and food safety experts that HACCP-based process control is the appropriate conceptual framework for the future of our food safety program.

We also believe that the regulations under development will reflect a major step in what should be the proper role of government in protecting the public health, and that is to set standards for food safety and ensure that the industry meets those standards. A system of regulation that is based less on "command and control" prescriptions of how industry produces its product and more on clearly defined responsibility for process control and practical food safety performance standards will work better to improve food safety. Performance standards are better because they provide incentives for innovation, accountability for achieving food safety results, and flexibility for companies to adopt the food safety process controls that work best in their establishments.

We are committed to providing technical assistance to plants—particularly small plants—to make the transition to HACCP. During 1996, we plan to begin demonstration projects to illustrate how HACCP can work in small plants. In addition, we plan to have a number of assistance materials available, including generic HACCP models for all process categories, a HACCP plan guidebook, and a hazards and prevention measures guide.

CHANGE WITHIN FSIS

The move to HACCP-based process control and performance standards will require the industry to change how it does its job, but it also embodies a fundamental shift in philosophy for FSIS. To make our new strategy work, FSIS must change its existing regulations, its organizational structure, and its approach to inspection. We have taken a number of concrete steps to bring about these fundamental changes.

First is our regulatory reform effort. On December 29, 1995, we published a notice in the Federal Register describing our regulatory reform strategy. We also published a final rule streamlining our prior approval system for labels and a proposal to cooperate more closely with the Food and Drug Administration on ingredient approvals and to eliminate redundant FSIS ingredient reviews and rulemaking. We are preparing proposals to eliminate the prior approval system for facility blueprints, equipment, and most partial quality control (PQC) plans and to add a performance

standard alternative to the current command and control requirements of the regulations governing cooked meat and poultry products.

The December notice also invited comment on a long list of FSIS regulations that may need revision to be consistent with HACCP. FSIS will be overhauling its existing regulations to be consistent with HACCP so that HACCP is not simply layered on top of outdated rules.

But regulatory reform is only one part of our strategy to prepare FSIS for the future. We are also planning a sweeping reorganization to prepare the Agency to implement a modernized system of inspection. FSIS is currently organized around managing an in-plant command-and-control inspection system. We cannot operate under a new food safety paradigm with an outdated organizational structure. We must align our structure with our HACCP-based, farm-to-table food safety strategy.

During fiscal year 1995, FSIS conducted a top-to-bottom review of the Agency's regulatory roles, resource allocation, and organizational structure, and based on the work of the Top-to-Bottom review teams, FSIS has developed a far-reaching reorganization plan.

The reorganization plans are being completed and will require review and approval through USDA before implementation can begin. We expect the approval process to take several months. Implementation will be phased in and is expected to take six months at headquarters and two years in the field.

The objective of the proposed reorganization is to consolidate and further streamline the headquarters and field management structures so they will work more cohesively and efficiently. In addition, FSIS has been streamlining non-inplant staff since 1995, and the new structure should accommodate the Agency's need to function with fewer staff. With these changes, FSIS would be able to increase the proportion of resources that are deployed to the Agency's frontline workforce—food inspectors, in-plant veterinarians, import inspectors, laboratory personnel, compliance officers, and first-level supervisors.

At headquarters, the number of organizational units reporting to the FSIS administrator would be reduced from 13 to 7. The major new offices proposed are: the Office of Public Health and Science; the Office of Field Operations; the Office of Policy, Program Development, and Evaluation; and the Office of Management. In addition, three small staffs would exist within the administrator's office: Executive Secretariat, Food Safety Education and Communications Staff, and Legislative Liaison Staff. In addition to reducing the number of offices reporting to the administrator, the proposal would eliminate the associate administrator level of management and reduce the number of senior management positions.

The proposed new Office of Public Health and Science would combine some of the activities currently conducted by the Science and Technology Program with the activities currently conducted by the Epidemiology and Emergency Response Program. This office would provide new focus, leadership, and scientific expertise in these areas.

The proposed new Office of Policy, Program Development, and Evaluation would centralize the management of all policy, rulemaking, and program development activities to better lead and evaluate program changes. This new focus will be critical as we work to transform our program in coming years.

In addition to making important changes in the headquarters structure and focus, our proposed reorganization would also unify and streamline the management structure in the field. We currently have four separate field structures—Inspection Operations, Compliance, International Programs, and Egg Products—that are based in 46 field management offices. We propose to establish a single, unified field structure that would carry out all domestic and international meat, poultry, and egg product inspection and compliance activities through 18 district offices and a centralized technical services center. We would collapse the five regional offices and 26 area offices into 18 districts, thus eliminating one of the three supervisory/management layers in the current Inspection Operations structure. We believe the proposed district office structure would make supervisory spans of control more manageable and better balance workload.

Following implementation of the district structure, the number of circuits could be reduced slightly based on appropriate workload changes and eliminating circuit and area overlap. But we envision circuit supervisors playing an even more critical role in the future as frontline supervisors overseeing HACCP-based, in-plant inspection as well as an array of other activities inside and outside the plant.

The FSIS Field Automation and Information Management (FAIM) program is an essential companion to the field office consolidation because it will provide automation equipment to inplant and other field personnel. FAIM will enable FSIS to communicate large volumes of complex information—such as laboratory test results and current technical and managerial information—rapidly to its widely dispersed in-

spection personnel. Fiscal year 1995 was the culmination of three years of ground-work for the FAIM initiative. FSIS is completing the first implementation phase this month, which is to provide automation to the field supervisory structure. We are now beginning a six month period of providing automation to implant inspection personnel from four areas—Greenbelt, Maryland; Jackson, Mississippi; Springdale, Arkansas; and Salem, Oregon. By the end of fiscal year 1996, FAIM will extend to all of International Programs, all field circuit supervisors in Inspection Operations and the Egg Products Division, and five areas in Inspection Operations.

The consolidated field technical services center, which would be created along with the 18 district offices, would, among other things, provide technical expertise and guidance to inspection personnel on the interpretation, enforcement, and application of domestic and import regulations, policies, and systems. With this center, answers provided to our employees would be more immediate and more consistent, a change that will benefit our program and industry alike.

We are enthusiastic about completing this plan, because we intend for it to prepare FSIS for success in the future. It will significantly streamline management and support functions both in headquarters and the field. It will align our organizational structure with HACCP and a farm-to-table perspective. It will ensure that FSIS is devoting as many of its resources as possible to frontline food safety and consumer protection activities. And it will strengthen our focus on public health priorities and on the need to carefully plan, implement, and evaluate program changes.

All told, we expect through this reorganization plan to show a reduction of non-frontline staffing of 20 percent by 1999, accelerating a decline in such staffing that began in 1993 and enabling FSIS to maximize application of its resources to frontline activities.

Finally, building on our HACCP rules, our regulatory reforms, and our new organizational structure, we plan to begin soon a public process on a new major initiative. We believe it is time to pilot test new approaches to inspection that would, within our current statutory mandate and still meeting all the consumer protection objectives of the current system, ensure that FSIS is making the best possible use of its resources to improve food safety.

Under the current system, a large percentage of our inspection resources are devoted to tasks that do not necessarily provide us with the greatest possible return in terms of public health protection. We must redefine the entire inspection process, including post-mortem inspection, in a manner that better protects the public and more effectively uses our inspection resources not only within meat and poultry plants but at other points where hazards arise, such as during transportation, storage, and at retail.

We believe that carcass-by-carcass inspection accomplishes a number of important consumer protection objectives, and we intend to continue to fully meet that statutory obligation. However, we recognize that there may be better ways—both from an effectiveness and efficiency standpoint—for FSIS to meet these important consumer objectives. With HACCP in place as a framework for addressing safety issues, and given the reality that we have a finite amount of resources, we can make better use of our resources in carrying out our inspection responsibilities.

I want to stress also that our goal is not to reduce our frontline resources—including inspectors, compliance officers, and laboratory personnel. We consider rigorous inspectional oversight to be essential to the success of HACCP and to maintaining public confidence in meat and poultry products. Rather, we want to redeploy our frontline resources within the plants and into roles at other points in the farm-to-table chain—for instance, during transportation, storage, and retail—that will make an even greater contribution to food safety.

We believe there may be tasks currently performed in plants that could be performed more efficiently outside the plant or through a combination of inplant and marketplace activities. Examples include ensuring compliance with labeling requirements and standards for added substances such as water in products.

By performing inspection tasks more efficiently, we will have the resources to handle new tasks along the farm-to-table chain that are critical to food safety. We plan to look at the farm-to-table continuum and identify, through risk assessment, points along the continuum where there is the greatest risk to the public health. We will consider those points as potential focuses for inspection and other efforts and determine more specifically what roles our employees should play during marketing, transportation and retail.

For example, we know that temperature control after products leave the federally inspected plant is a critical area. We believe FSIS has a role to play in setting standards for proper temperatures during the cold chain, from manufacturer to user, and ensuring that they are maintained. We also see a potential role for FSIS in such areas as training state and local regulatory officials on methods of inspect-

ing meat and poultry handling and processing in retail and food service environments and working cooperatively with producers and producer groups to foster good production practices before animals reach the slaughter plant.

We will pursue this modernization of inspection through an open, participatory public process. We intend to pilot test alternative inspection models and gather data to help us ensure that any major changes we make contribute to our goal of improving food safety. We hope to publish a Federal Register notice initiating this process in the next month or two.

This is a high priority project, but we must also recognize that it is a long-term project. The kind of fundamental change we envision cannot be designed and implemented quickly. It has to be done, but it also has to be done right.

FISCAL YEAR 1996—A PIVOTAL YEAR

As we plan for the future, we are taking our current inspection responsibilities very seriously. We are making every effort to maintain and properly operate the current program by taking a number of steps to improve the allocation of our resources.

First, FSIS is continuing to hold the line on non-inspection related expenses, such as travel, and will continue this policy in the future. Since 1988, non-salary operating expenses have grown by only 2.3 percent, in spite of 8 years of inflation. Travel expenditures alone have decreased in absolute terms during the same period because the Agency has restricted the travel of non-inplant personnel. FSIS also has in place a freeze on non-inplant hiring and has made two offers of early-out retirement to employees during fiscal years 1995 and 1996. A total of 158 employees accepted early-out retirement offers in fiscal year 1995—131 inplant and 27 non-inplant. The second early-out offer does not apply to inplant employees and will remain open until August 3, 1996.

Second, FSIS is working within its current authority to apply inspection resources where they are most needed. This involves giving high priority in the management of our inspection resources to tasks involving higher risk activities and to meeting our mandatory inspection obligations in slaughter plants.

Third, FSIS is increasing the use of other-than-permanent inplant personnel in a relief capacity, thus freeing permanent staff to cover other assignments and allowing for more normal use of earned time off by permanent staff.

Fourth, the pilot studies on alternative approaches to online slaughter and processing inspection that I discussed earlier are designed not only to improve the safety of raw meat and poultry products, but also to more efficiently apply our resources to meet the statutory mandates of the program. These steps will help alleviate the spot inspection shortages FSIS has experienced recently.

1996 SUPPLEMENTAL APPROPRIATION REQUEST

The current appropriation does not provide sufficient funds to prevent further erosion in inplant staffing levels and make the necessary investments in inspection modernization. Consequently, we are requesting a 1996 supplemental appropriation of \$9.5 million to address these costs. This funding will allow FSIS to maintain employment at levels necessary to carry out our basic mission.

The request will allow us to add 100 other-than-permanent staff years to the inplant inspection force in order to keep pace with industry growth and maintain uninterrupted inspection services through the end of the fiscal year. The supplemental is also needed to staff the Animal Production Food Safety program within FSIS and to continue critical epidemiological studies conducted under reimbursable agreements with APHIS. Data from these studies will enable FSIS to predict or project risk factors and emerging issues of public health significance and to improve the understanding of the role of animal production management practices in the farm-to-table food safety chain. The supplemental will also fund the costs of training FSIS employees in HACCP methods, enable us to pilot test HACCP based inspection systems, and to engage with the States in small plant HACCP demonstration projects.

FISCAL YEAR 1997—A TRANSITION YEAR

If fiscal year 1996 is a pivotal year for us in terms of designing and laying out our strategy, fiscal year 1997 will be a pivotal year in making the transition to the new FSIS. Our budget request for fiscal year 1997 reflects an ambitious plan to transform our program to the new, science-based system I have just described. It reflects not just our intention to require industry to implement HACCP systems, but also to make fundamental changes in FSIS as an organization. And it reflects our intention to address the entire farm-to-table food safety continuum.

During 1997, we will continue training our field work force in HACCP techniques to prepare for the implementation of HACCP. As we test new approaches to inspection and as we implement HACCP, we will begin to use our inplant inspection force in new roles within plants and at other points in the farm-to-table chain. Because we expect these new roles to encompass more sophisticated food safety activities, we are proposing to upgrade 1,000 inspection positions to meet this need.

We will also prepare our laboratories and our laboratory personnel for the increased number of microbiological analyses that will be required to be performed under the new performance-based food safety system with its enhanced focus on harmful bacteria.

During 1997, we plan to complete our reorganization at headquarters, which will improve resource utilization and better equip the Agency to implement its strategy for change. We will also begin the reorganization in the field.

We will continue the regulatory reform initiatives that began in 1996, including overhauling existing regulations to be consistent with HACCP so that HACCP is not simply layered on top of outdated rules. By 1997, our new rule that expands the types of labeling exempt from prior approval and streamlines label approval procedures will be implemented, thus providing some regulatory relief to industry.

During 1997, we will continue pilot testing of alternative methods of inspection, and based on these pilots, begin to make needed changes in our inspection program to coincide with the implementation of HACCP.

As we increase the efficiency of our program through these initiatives, we will also begin, during 1997, to identify those additional tasks from farm to table that are critical to food safety and that we believe are the responsibility of FSIS. We will work through the appropriate Federal, State and local authorities who share jurisdiction in these areas as we proceed.

1997 BUDGET REQUEST

To accomplish our goals, for fiscal year 1997, we are making a current law request of \$574 million—an increase of \$29.1 million over the amount available for 1996. This proposal includes increases of \$12.5 million for statutory pay costs and \$10.5 million for program investments beyond continuing the investments contained in the 1996 supplemental.

Legislation will be proposed again to recover the cost of providing inspection services beyond the primary approved shift. This proposal will save \$109.4 million in federal outlays and will put all plants on an equitable financial basis as all plants already must pay costs for overtime. Currently, large plants often have more than one approved shift with free inspection services, whereas small plants do not.

FSIS is required by law to provide inspection to all slaughter, processing, and egg plants that request such service, and you will note that our 1997 budget request does not include funding to hire additional inspectors beyond the proposed 1996 supplemental level. This represents a departure from previous years, when our budget request emphasized filling the growing number of inplant vacancies. FSIS is committed to transforming the inspection program within current staffing levels. We have made a conscious decision to improve our program by modernizing the deployment of our current resources. Fiscal year 1997 will be a transition year for FSIS—a year in which the Agency will hold staffing level and prepare to redeploy existing resources in accordance with a science-based, farm-to-table strategy. This shift in our strategic direction respects current budget realities and results in our fiscal year 1997 budget request being \$21 million less than we requested for fiscal year 1996.

Our budget request for 1997 would provide us with the resources needed to prevent further decline in frontline staffing levels and operate the inspection program for the year. Through implementation of the reorganization, FSIS will work to maximize the resources applied to frontline activities, including inspection.

We are aware of the strain the current inplant inspection program is under and that the strain will continue by maintaining inplant staffing at current levels. As you know, the demands on our current inspection program are driven by industry growth; we are required by law to provide inspection services to any company that requests and qualifies for Federal inspection. We are aware that staffing shortages have led to sporadic interruptions in line coverage and that the coverage of inspection assignments has had to be prioritized.

I recognize this is not an ideal situation, but I believe that program modernization must be a priority if FSIS is to survive the current pressures it faces. Through these modernization efforts, we will be able to do a better job with the same amount of resources available to us and we hope eventually reduce, for the long term, the resource strain under which our program currently operates.

1997 BUDGET INITIATIVES

In 1997, FSIS proposes to build on investments begun in the 1996 supplemental with an increase of \$10.5 million, including \$2.4 million in investments to continue retooling our work force to meet its changing regulatory responsibilities. We plan to aggressively pursue pathogen reduction by applying HACCP principles both within and beyond the inplant setting to encompass the farm-to-table food safety continuum.

The inplant setting will continue to be critical to ensuring food safety and will require more than 70 percent of the Agency's fiscal resources. FSIS will look to the in-plant work force to verify industry HACCP plans. The budget assumes that an estimated 800 slaughter inspectors will be prepared for redeployment to perform more complex HACCP monitoring activities, and 200 processing inspection staff years will be assigned to monitor HACCP-related prevention activities both within and beyond the inplant setting. The pilot projects mentioned earlier could demonstrate alternative post-mortem inspection procedures that will drive a reallocation of resources to perform tasks that are focused on health and safety issues. For example, slaughter inspectors could begin verifying HACCP records, taking samples when appropriate for microbiological testing and for verifying that plant employees properly performed sorting and other industry tasks associated with presenting carcasses for inspection. New inspection tasks outside the plant are under development as well.

To support implementation of HACCP systems, FSIS proposes to increase its frontline scientific capability in four areas.

First, we are requesting \$3 million to fund increased microbiological sampling and testing as HACCP is implemented. Pursuant to implementation of the HACCP rule, microbiological sampling and testing is reasonably expected to increase. The budget assumes that fiscal year 1997 will involve 125,000 samples, which is more than twice the number of samples estimated for fiscal year 1996. Additional staffing and equipment for microbiological testing would enable FSIS to verify HACCP systems by providing the essential personnel and means to increase the Agency's performance in detecting pathogen contamination.

Second, FSIS is requesting \$1.5 million to renovate its laboratories to accommodate the large and sustained increases in sampling that will likely result from implementation of the Pathogen Reduction and HACCP regulations. Implementation of the HACCP rule will require greater use of science-based and risk-based methodology by inplant personnel and will increase the need for support through laboratory analysis and other services. As microbiological sampling and testing increase, there will be a large and sustained increase in the workload of FSIS laboratories. Renovation of FSIS laboratories will be necessary to accommodate the increase in workload volume and the expansion of testing to cover a broader range of pathogens. Our funding request will enable FSIS to reconfigure its laboratories, upgrade utilities, and install laboratory equipment to accommodate the likely increased and expanded use of laboratories associated with HACCP implementation.

Third, the request includes \$3.1 million for adapting new technologies to food safety inspection. Under HACCP, the role of the inplant work force will expand to cover a broader and more complex range of food safety activities. Adapting automated and sensory technology to food safety applications will enhance the inspection system by improving the Agency's ability to evaluate food safety hazards, and therefore facilitate the expansion of the inplant inspector's role in food safety. Sensor technology can be used for temperature measurement, ingredient and species analysis, and to assess the sanitary status of facilities and equipment. In addition, it will diminish the risk of physical trauma, such as repetitive motion disorders, to the inspection force.

Our request for technology adaptation funding also provides for the development of alternative interventions that can be applied to small businesses. The meat and poultry industry is primarily responsible for developing the technology necessary to implement HACCP, but such technology is not "one size fits all." For example, industry has developed steam equipment for removing bacteria from beef carcasses. This equipment is designed for high-volume operations and may be too costly for small businesses. FSIS plans to work collaboratively with small businesses through pilot and demonstration projects to develop cost-effective alternatives that will accomplish the same objectives as technologies designed for larger operations.

Finally, our request includes \$0.5 million to add six public health professionals to the FSIS staff in fiscal year 1997. These additional public health professionals are critical to the Agency's efforts to establish and maintain a close working relationship with State and local health departments, to coordinate investigations of outbreaks associated with meat, poultry, and egg products, and to maintain surveillance of

foodborne disease. Increasing USDA's capability to conduct investigations of foodborne illness outbreaks will provide a clearer picture of nationwide problems and will enable FSIS to develop comprehensive and preventive measures which will reinforce HACCP systems and lead to a measurable decline in foodborne illness.

TRANSITION TO THE FUTURE

We have in place a long-term strategy that we believe will move FSIS to its ultimate goal, which is to implement a HACCP-based system and redeploy FSIS resources to more broadly and more effectively address food safety hazards. But we recognize that it will take several years to complete the transition to a modernized system.

By the end of 1996, we will have finalized the design of our HACCP-based regulatory framework and begun testing of new models for deploying inspection resources. We expect fiscal year 1997 to be a transition year, during which we will begin implementation of the new regulatory framework and complete the design of a modernized approach to deployment of our resources. Fiscal year 1998 will also be a transition year, but the pace of change will quicken as more plants operate under HACCP, as our reorganization nears completion, and as we redeploy our resources to perform new tasks within plants and at other points in the farm-to-table chain that we have identified as important to public health.

By the beginning of the next decade, we will have completed the transition to a system of food safety protection that will truly work better to ensure food safety, will make better use of our scarce resources, and earns the support and confidence of the public.

CONCLUSION

Mr. Chairman, this concludes my prepared statement. Thank you for the opportunity to testify on the new direction our Agency is taking and on our budget request for the coming fiscal year. I will be happy to answer any questions that you or the other members of the subcommittee may have.

PREPARED STATEMENT OF MICHAEL DUNN

Mr. Chairman and members of the Committee, I am pleased to appear before you to discuss the activities of the Marketing and Regulatory Programs of the U.S. Department of Agriculture and their fiscal year 1997 budget proposals.

With me today are Dr. Lonnie J. King, Administrator of the Animal and Plant Health Inspection Service, Mr. Lon Hatamiya, Administrator of the Agricultural Marketing Service, and Mr. James Baker, Administrator of the Grain Inspection, Packers and Stockyards Administration. They have prepared statements for the record and will answer questions regarding the budget proposals for their specific programs.

MARKETING AND REGULATORY PROGRAMS

The mission of the Marketing and Regulatory Programs is to facilitate the domestic and international marketing of U.S. agricultural products and to ensure the health and care of animals and plants. These activities improve market competitiveness and the economy for the overall benefit of both consumers and American agriculture.

Fiscal Year 1997 Budget

We are requesting a current law appropriation of \$538 million to fund \$781 million of Marketing and Regulatory Program activity. The remaining \$243 million will be collected as fees for service to users. This appropriation request is \$8.4 million more than the current estimate for 1996. We will submit legislation in the near future to authorize the recovery of an additional \$24.6 million in license and user fees. I will use the remainder of my time to highlight the Department's budget requests for the Marketing and Regulatory Programs.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

The Animal and Plant Health Inspection Service (APHIS) is responsible for protecting U.S. animal and plant resources from diseases and pests. APHIS leads the way in anticipating and responding to issues involving the introduction of destructive foreign plant and animal pests and diseases by monitoring and disseminating information regarding plant and animal pests and diseases; conducting programs to prevent, detect, and eradicate harmful pests and diseases; developing methods to

control animals and pests that threaten agriculture or constitute a public health or safety hazard; and ensuring that warm-blooded animals used for research, exhibition, or sold wholesale as pets receive humane care and treatment.

American agriculture is being transformed from the way we once knew it. The global marketplace is becoming a reality. Our traditional approaches are seen by many as unduly burdensome. They are being replaced by innovative, customer-friendly systems. We find the globalization of agriculture to be expanding the Agency's mission.

Program Accomplishments and Plans

Pest and disease exclusion is the primary focus of the Agricultural Quarantine Inspection program. Inspectors operate at ports of entry to protect American agriculture from the introduction of exotic plant pests and animal diseases. The Agency inspected and precleared approximately 63 million passengers at U.S. airports and other ports of entry in 1995, an increase of one million from 1994. Appropriated funds finance the domestic operations between Puerto Rico, Hawaii and travelers at the Canadian and Mexican borders while user fees from international travelers and cargo transit operators finance nearly 80 percent of the total inspection activities.

APHIS worked with the U.S. Customs Service, the Immigration and Naturalization Service, and the State Department in a Border Passenger Processing Re-engineering Initiative to enhance processing of international passengers. The enhanced procedures will expedite passenger processing while maintaining or increasing compliance with current U.S. laws and regulations. We will be testing these new passenger processing methods at several land border and international airports, and rapid implementation is expected at all points of entry.

APHIS also worked with the U.S. Customs Service, maritime and air cargo lines, and importers in developing the Automated Cargo System for electronic transmission of cargo data and entry documents. APHIS maintains electronic equipment at 33 maritime locations and 26 airports. The new Automatic Targeting System will facilitate trade by speeding up tracking and enforcement of regulated agricultural commodities.

On March 4, 1996, Vice President Gore announced that the National Performance Review had selected the AQI user fee program to be a Performance Based Organization. These programs will operate like a business to emphasize service to satisfied customers and achieving results. We will hire a chief executive who will be personally accountable for delivering results. The internal culture of the AQI user fee program will be revamped. We will propose legislation to modify the personnel system for this activity to expand the authority to enable workers to better meet the plant pest and animal disease exclusion mission.

APHIS negotiates plant pest and animal disease protocols with foreign countries that facilitate international trade. In 1995, APHIS issued 274,000 phytosanitary certificates covering the export of \$24 billion in plants and plant products. APHIS helped the U.S. Trade Representative in resolving commodity disputes with foreign governments over sanitary and phytosanitary issues. It also continued to identify, develop, and implement resolution processes for emerging trade issues through continuous contact with industry, foreign governments, and other U.S. agencies. Phytosanitary issues were negotiated with Taiwan and China to enable sales of \$120 million in apples and other fruit.

The import/export inspection program provides regulatory oversight over the importing and exporting of approximately \$70 billion worth of agricultural products. The services provided by this program protected U.S. livestock, poultry, and wildlife populations from exposure to exotic disease, and expanded markets abroad by assuring that exported animals and animal products met the health requirements of recipient countries. Fulfilling the import mission, APHIS provided permits for four million animals, 21 million poultry, birds, and hatching eggs, 600,000 doses of semen, 3,000 embryos, and 6,000 product import permits. The program issued point-of-origin certificates for the export of approximately 700,000 head of livestock, 28 million live poultry, 49 million hatching eggs, seven million doses of semen, and 14,000 embryos.

In response to international trade agreements and directives to modernize import requirements, we are incorporating regionalization and risk assessment into the import/export decision-making process. The concept of regionalization will replace the country-by-country, free or not-free status, with several levels of pest and disease risks associated with various mitigation measures to enable import commodities to come from parts of countries. Reciprocal treatment by foreign governments to our production areas will be more than offset by expanded exports.

Domestic plant pest management control methods have become more sensitive to environmental concerns. Parasites for such pests as the Russian Wheat Aphid and Sweetpotato Whitefly are being developed through improved foreign collection, quarantine screening, mass rearing, and evaluation of exotic enemies. In 1994, we shifted to a 2-year area-wide eradication strategy for the fruit fly infestations in Los Angeles County. This effort relies on the weekly release of large numbers of sterile flies, localized chemical applications as necessary, and significant educational efforts to prevent new introductions of fruit flies. We expect to completely eradicate this infestation in 1996.

Important features of the domestic disease and pest control programs include the cooperative partnerships with producers, accredited veterinarians, allied industry representatives, and State agricultural health officials. For example, the Brucellosis Eradication program has reached a major milestone in the cooperative State-Federal Brucellosis Rapid Completion Plan. It brought the total number of quarantined herds in the U.S. to a record low of fifty. The goal for eradication is the end of fiscal year 1998. Regarding bison, APHIS recently agreed with other Federal agencies and Montana State officials on an interim management plan, to decrease the need for lethal control methods conducted by State officials and to reduce the risk of spreading the disease. The involved agencies have committed to developing a long-term bison management plan.

In 1995, APHIS investigated and resolved 550 complaints and conducted nearly 14,400 license and registrant inspections to ensure the proper care of animals under the Animal Welfare Act. APHIS' leadership and cooperative efforts for animal welfare include a collaborative project with the Scientist's Center for Animal Welfare to review the effectiveness of research facilities. APHIS recently held public hearings in Missouri and Kansas to solicit input from the public regarding animal welfare issues to improve the conditions for cats and dogs handled by commercial breeders and dealers licensed under the AWA. To improve service delivery, APHIS will hold a national conference in April for its animal care employees to focus on customer service, inspection quality and interpersonal skills.

The horse show industry is monitored to eliminate the soring of horses. This program incorporates the use of infrared thermography in protecting horses.

The Animal Damage Control program strives to alleviate the damage caused by wildlife and emphasizes non-lethal methods through an integrated pest management approach. Statistical reports show that predators killed nearly 370,000 sheep and lambs and 140,000 goats in 1994. ADC continued to provide assistance, with full reimbursement, to JFK International Airport to reduce bird strikes to aircraft. This was the fifth consecutive year that APHIS had conducted operational gull control at the airport. As a result of these efforts, laughing gull bird strikes have been reduced by approximately 75 percent.

APHIS Funding

We are requesting a current law appropriation of \$464 million for salaries and expenses for 1997, an increase of \$5 million from the 1996 current estimate. Of the proposed amount, \$125 million would be derived from AQI user fees from international travelers and transit operators. The budget proposes \$10 million to develop a new proactive prevention program for Medfly. It will enable APHIS to release sterile Medflies that suppress reinfestations in the continental United States. This program is designed to alleviate the need to use emergency funds to eradicate sporadic reinfestations. We are seeking to become independent of the Commodity Credit Corporation to combat emergency pest and disease outbreaks. The State of California would continue to participate in a cooperative effort in this activity. The budget includes a legislative proposal to provide authority for collecting \$7.5 million of user fees for selected activities in biotechnology, veterinary biologics, and animal welfare.

In an effort to further streamline program operations, the budget also proposes to revise the budget line item structure for plant health and international activities. The agency proposes to group import/export inspection and international programs under a new sub-heading called "sanitary and phytosanitary standards"; and to merge scrapie into the animal health monitoring and surveillance item because it primarily funds monitoring and surveillance work.

AGRICULTURAL MARKETING SERVICE

The fundamental mission of AMS is to facilitate the strategic marketing of agricultural products, ensure fair-trading practices, and promote a competitive and efficient marketplace. The AMS programs enable the private sector marketing system to provide food and other agricultural products more efficiently, with greater dependability, lower economic cost, and higher equitable treatment among the participants. AMS' activities include the dissemination of market information, develop-

ment of grade standards—many of which are used in the voluntary grading programs funded by user fees, protection of producers from unfair marketing practices, random testing of commodities for pesticide residues, oversight of industry funded programs to promote agricultural products, research and technical assistance aimed at improving efficiency of food marketing and distribution. AMS also administers marketing agreements and orders at the national level and purchases commodities that support domestic feeding programs.

Program Accomplishments and Plans

In response to the changing needs of its customers, AMS has broadened the focus of its programs to incorporate a global approach to marketing services. The agency is developing international market intelligence to support expanded foreign markets. These activities will enable agricultural exporters to take advantage of expanding global marketing opportunities. First, AMS has broadened its international market news activity. Through cooperative exchanges of information between the United States and countries in Europe, Canada, Mexico, and Asia, AMS provides critical market information, such as current prices and volume traded, to U.S. producers that want to take advantage of these markets.

Second, AMS is providing technical assistance aimed at increasing export opportunities through market development activities. These activities include USDA's Emerging Democracy Program and representing the United States on international trade organizations. By improving the market information, grade standards, and distribution systems of countries participating in the Emerging Democracy Program, new markets will be created for U.S. products. Participation by AMS commodity experts in the development of international standards ensures that U.S. producers will not be at a disadvantage in the global economy.

Finally, through seminars, workshops, and conferences we offer exporters the knowledge they need to gain access and take advantage of global marketing opportunities.

Besides taking an active role in developing international marketing of U.S. agricultural products, AMS is also improving the marketing and distribution of those products domestically. Through the Wholesale Market Development program, AMS is working with small growers to help them take advantage of expanding markets in or near metropolitan areas through farmers' markets. As many urban super-markets close, the urban consumer is left with limited and often costly sources of fresh agricultural products. One way to address the needs of these consumers is through farmers' markets. These markets represent a growing segment of the industry, with annual fruit and vegetable sales estimated to be over \$1 billion annually. Furthermore, research shows that farmers' markets are very important to small producers. In a recent survey of 700 farmers' markets it was reported of the 30,000 producers using these markets, 38 percent, or 11,400 producers used the farmers' markets as the only outlet for their products. To foster the growth of urban farmers' markets, AMS is conducting research to determine the feasibility of using central-city historic structures to market more fresh agricultural products to the urban poor.

Another marketing opportunity of growing importance to the small farmer is the market for organic food. In 1990, when the Organic Foods Production Act was enacted, approximately 2,800 producers were producing organic agricultural products. At this time we estimate that the number of those producers has doubled and is still growing. The National Organic Standards Board has prepared recommendations for the Secretary on how to implement the Act and AMS is currently evaluating those recommendations and developing a proposed rule for publication this year.

Through the Pesticide Data program, AMS continues to provide the Environmental Protection Agency data needed to conduct dietary risk assessments, pesticide reregistration, and pesticide reviews. In fiscal year 1995, the program conducted approximately 49,000 analyses for 62 pesticides on over 8,000 samples. The analyses used state-of-the-art techniques and generally showed pesticide levels substantially below established tolerances. This high quality, statistically reliable data once again demonstrates that the U.S. food supply is one of the safest in the world.

AMS Funding

For 1997, the AMS budget request includes a current law appropriation of \$48.3 million for the Marketing Services program and \$1.2 million for the Federal-State Marketing Improvement program. AMS will continue to improve ongoing program activities while achieving management efficiencies. The budget proposes an increase of \$1.2 million to expand educational and compliance activities for the Pesticide Recordkeeping program in the 12 states without a program. AMS will provide educational assistance or financial support to 38 states in 1996: 20 states have their

own pesticide recordkeeping programs and 18 states work cooperatively with AMS. The remaining 12 states have indicated they do not intend to either establish their own program or sign agreements with AMS. With the requested level of funding, AMS can provide national coverage for the program.

We are also proposing legislation to recover the \$10.6 million cost for Federal oversight of marketing agreements and orders. These costs will be collected through increased assessments paid by producers and handlers who benefit from the program.

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

GIPSA was established on October 20, 1994, under the authority of the Department's Reorganization Act of 1994, to administer programs and functions of the former Federal Grain Inspection Service and the Packers and Stockyards Administration. The Agency programs and services promote a competitive, efficient market structure and facilitate the marketing of grains, oilseeds, rice, livestock, meat, and poultry in domestic and international markets. The Agency establishes official U.S. standards for grain, official weighing and grain inspection activities, and inspection of rice, dry beans and peas, processed grain products, and hops. The Agency also provides assurance for the financial integrity of the livestock, meat, and poultry markets. The Agency monitors competition to protect producers, consumers, and industry from deceptive and fraudulent business practices that affect meat and poultry prices.

Program Accomplishments and Plans

In 1995, GIPSA collected \$27 million for official grain inspection and weighing services. The official services are mandatory for the \$18.7 billion of exports of wheat, corn, coarse grains, rice and soybeans. The fee represented less than 0.2 percent of the total value of these exports. In 1995, the program performed nearly 2.6 million official inspections; 600,000 protein oil tests; 100,000 mycotoxin tests; and a variety of other services.

GIPSA is working to maintain worldwide confidence in the quality and value of U.S. grain exports. In fiscal year 1995, GIPSA developed their first customer service standards. The standards pledge to extend courtesy, and respect, fairness, clarity, accessibility, timeliness, and responsiveness to its customers. In February 1995, GIPSA implemented a prohibition on adding water to grain. The prohibition responds to domestic and international customers' concerns that water is often applied, not to suppress dust for safety and air quality purposes, but to increase the weight of grain and by that gain a market advantage.

Finally, GIPSA's Grain Inspection program is taking aggressive steps to position itself to meet the challenges of the future. The program is working on a long term improvement process to strengthen its organizational culture by making quality and customer service priorities. The result will be a national grain inspection and weighing program that can quickly and effectively meet the changing needs of our customers in the United States and the global marketplace.

GIPSA provides payment protection to livestock and poultry producers by focusing on the financial integrity of the livestock marketing and meat packing industries. GIPSA monitored 1,385 stockyards; 7,100 market agencies and dealers; 6,400 meat packers and 2,100 registered packer buyers who are engaged in the livestock marketing business. Another 6,900 meat distributors, brokers, and dealers, and an estimated 250 poultry firms are subject to the P&S Act. Firms subject to the Packers and Stockyards Act handled products valued at \$96 billion in 1994.

The statutory trust provisions of P&S have been very successful in recovering losses from failures by meat packers and live poultry dealers. Over the past five years, more than \$10.7 million has been recovered by livestock producers under the packer trust provisions. During 1995, poultry producers recovered \$1 million from four poultry processors under the statutory trust provisions. Since the P&S Act was amended in 1987, poultry producers have recovered over \$7.1 million under the poultry trust provisions. During 1995, seven auction markets failed financially. They owed \$750,000 for livestock. Of that amount \$311,000 was subsequently recovered from bonds and other sources. For livestock dealers and order buyers, the losses were much larger. During the last fiscal year, 16 dealers and order buyers failed financially. They owed livestock producers \$1.6 million, of which only \$431,000 was recovered.

The study of concentration in the red meat packing industry was mandated in the 1992 appropriations act and its scope and focus were developed under the leadership of then-Secretary Ed Madigan. The \$500,000 study was conducted under contract at a number of Land Grant Colleges and the Economic Research Service. It was released in February 1996 and we have copies available for the Committee. We appre-

ciate the foresight in making this study a reality. It provides a snapshot of a dynamic and changing industry. While it lays a solid foundation of new information, many important questions remain unanswered. As a result, Secretary Glickman has established a 21-member advisory committee on agricultural concentration. The members represent producers, industry, economists, and other representatives of the agricultural community. They will develop recommendations for possible actions to ensure competitive agricultural markets by June 1996.

GIPSA has been increasing the frequency and sophistication of its investigative and surveillance efforts to ensure that slaughtering packers are actively competing for their slaughter requirements and not engaging in any illegal trade practices. In addition, the Agency has been conducting semiannual investigations of hog slaughtering firms that use electronic evaluation devices as part of their purchasing programs to ensure that the devices are used in a fair and accurate manner.

GIPSA Funding

We are requesting a current law appropriation of \$24.6 million for fiscal year 1997. The total program level for grain inspection and packers and stockyards is \$67.8 million of which \$11.1 million would be appropriated for grain activities associated with compliance, standardization, and methods development; \$43.2 million for fees to inspect and weigh grain; and \$13.5 million for packers and stockyards activities. The fiscal year 1997 budget proposes legislation to authorize the collection of \$3.6 million in new user fees to cover the costs of grain standardization activities and \$13.5 million for license fees to cover all of the packer and stockyards activities. We are requesting \$3.5 million to cover the capitalization and start-up costs to implement the P&S license fees.

For P&S Programs, the budget proposes an increase of \$225,000 to develop electronic filing procedures for annual reports, \$480,000 to increase investigations of deceptive and fraudulent practices that affect the movement and price of meat animals and their products, and \$550,000 for increased analysis of industry structure and performance to monitor the competitive implications of behavioral practices in the meat packing industry and to support legal actions that require complex economic and statistical analysis. We will be proposing legislation to authorize the collection of license fees to administer all activities under the P&S Act. All meat packers, live poultry dealers, stockyard owners, market agencies, and dealers, as defined in the P&S Act, would be subject to the license fees. If the 1996 Farm Bill is enacted, we are also proposing to implement the dealer trust. It would be similar to the packer trust, which requires livestock inventories and accounts receivable from the sale of livestock to be held in trust for unpaid cash sellers when a dealer fails to pay for livestock.

CONCLUSION

Thank you for this opportunity to present the budget for these Marketing and Regulatory Programs. We believe the budget proposes funding amounts and sources that will assure the successful accomplishment of the Department of Agriculture's mission to serve our customers—the industry, consumers, and the general public. We will be happy to answer any questions.

PREPARED STATEMENT OF DR. LONNIE J. KING

Mr. Chairman and members of the Committee, I am very pleased to report on the use of resources you have entrusted to us. Using these resources, we focus all our efforts on the ultimate goal of helping bring food to the table, stimulating global economies, safeguarding agricultural resources, and protecting ecological systems. I will report on our efforts and outcomes in more detail.

Since I last appeared before this committee, we have modified our mission statement slightly. I would like to briefly explain the reason for the change and the process used. We deliberately chose the future search methodology over traditional strategic planning because we wanted to develop a direction and implement strategies that reflected the input of the entire organization, as well as those who affect and are affected by the work we do.

OUR MISSION

APHIS leads the way in anticipating and responding to issues involving animal and plant health, conflicts with wildlife, environmental stewardship, and animal well-being. Together with our customers and stakeholders, we promote the health of animal and plant resources to facilitate their movement in the global marketplace.

which helps to ensure abundant agricultural products and services for U.S. consumers.

APHIS' mission is being shaped by the globalization of agriculture. Last year, U.S. agriculture was responsible for a record \$53 billion worth of exports. About one-third of the total U.S. agricultural income now comes from international trade—up from one-quarter just 3 years ago. The Secretary has set a goal of doubling that number by the year 2000. The reality is that more than 95 percent of the world's consumers live outside the United States. We must ensure that our agricultural products meet internationally recognized standards for plant pests and animal diseases to respond to this unprecedented opportunity.

American agriculture has been transformed from the way we once knew it. Production agriculture is undergoing tremendous consolidation, specialization, and restructuring efforts. Many of our customers are multinational corporations and niche companies whose future is based on their global competitiveness. We recognize that many customers have very different needs from APHIS than they did in the past and that our traditional service delivery systems, based on the old farmstead models, are fast becoming outmoded. In addition, we face growing anti-agricultural sentiment and a public increasingly concerned with issues of environmental impacts and farm animal welfare.

APHIS is developing proactive strategies that will position us to meet the challenges and opportunities facing American agriculture in the next century. APHIS now also acts as a trade facilitator, developing uniform international health standards as stipulated by the General Agreement on Tariffs and Trade and the North American Free Trade Agreement and, at the same time, working to ensure that U.S. producers meet these standards. Our efforts have already reaped considerable profits. By negotiating new or updating existing animal and plant health protocols, APHIS has helped to secure many new markets overseas for U.S. agricultural commodities. China is a good example. In 1995, we signed agreements with the Chinese that opened the door to exports of apples from Oregon and Idaho and sweet cherries from Washington. New animal health agreements with China will facilitate exports of cattle, swine, bovine embryos, and ostriches. In this new era, a desire to enhance customer service is driving many of our efforts. In fact, the customer service guidelines developed by APHIS' National Biological Control Institute hang in the National Performance Review offices, setting a standard for other Federal agencies to follow. APHIS has undertaken many other initiatives to improve our services using a team and customer-based approach. We believe this approach will deliver the right services in the most cost effective way.

MOVING PEOPLE AND GOODS THROUGH PORT OF ENTRY INSPECTION

Trade works both ways, so we are importing more goods and more people are travelling internationally. Processing the ever increasing number of international travelers continues to present many challenges to all Federal clearance agencies. In an effort to enhance passenger processing, APHIS participated with the U.S. Customs Service, the Immigration and Naturalization Service, and the State Department in a Border Passenger Processing Re-engineering initiative. This project consisted of three multi-agency teams: a northern border team, a southern border team, and an international airports team, which examined processing of passengers and their baggage as they entered the United States. The teams looked for ways to expedite passenger processing while maintaining or increasing compliance with current U.S. laws and regulations. Alternative passenger processing methods currently being tested or slated for test implementation were included in the study. Plans were established to test new passenger processing methods at several land border and international airports, and rapid implementation is expected.

APHIS participated with the U.S. Customs Service, maritime and air cargo lines, and importers in the Automated Cargo System (ACS) for electronic transmission of cargo data and entry documents. APHIS maintained electronic equipment at 33 maritime locations and 26 airports. In addition, the Agency began preliminary work to develop an automated hold system for regulated cargo. The new Automatic Targeting System (ATS) will place holds on cargo based on entry and manifest data stored in ACS and the Agency's regulation criteria. The ATS will facilitate trade by expediting tracking and enforcement of regulated agricultural commodities.

APHIS continued to use specially trained dogs to detect prohibited items at international airports. In fiscal year 1995, the Agency maintained 48 trained dog teams at 20 major airports and post offices in the United States. APHIS plans to expand the program to 108 teams by the fiscal year 2000. The Agency continued to expand the use of "x-ray" technology as a screening tool in passenger baggage clearance at major international airports. There are x-ray scanning machines located at all for-

eign-arrival and predeparture sites as well as in two postal facilities. These are all examples of improved efficiencies of operations and leveraging new technology to protect our animal and plant resources and commodities.

On March 4, 1996, Vice President Gore announced that the AQI user fee program would be considered a candidate as a Performance Based Organization. We will be submitting legislation to enable improved operations.

IMPROVING THE GLOBAL FLOW OF AGRICULTURAL PRODUCTS

In fiscal year 1995, the import/export inspection program provided regulatory oversight over the importing and exporting of \$70 billion worth of agricultural products. The services provided by this program protected U.S. livestock, poultry, and wildlife populations from exposure to exotic disease, and expanded markets abroad by assuring that exported animals and animal products met the health requirements of recipient countries. Fulfilling this mission required oversight of the importation of approximately 4 million animals; 21 million poultry, birds, and hatching eggs; 568,000 doses of semen; 3,000 embryos; and 6,000 product import permits. The program issued point-of-origin certificates for the export of approximately 705,000 head of livestock, 28 million live poultry, 49 million hatching eggs, 7 million doses of semen, and 14,000 embryos. With regard to plant pest protocols with foreign countries, APHIS issued 274,000 phytosanitary certificates covering the export of \$24 billion in plants and plant products.

Cattle producers are enjoying record levels of exports of live animals and products and access to new markets as a result of improving health status in this country and free trade initiatives. One of the most vital new markets for U.S. producers is Turkey, to which about 9,000 animals have been exported so far, and there are contracts to export another 100,000 to 200,000 animals in the near future. We also recently signed a Memorandum of Understanding with Mexico to increase cattle exports to that country to help producers there rebuild their herds, which were severely affected by recent drought conditions.

In response to international trade agreements and directives to modernize import requirements, APHIS is incorporating regionalization and risk assessment into the import/export decision-making process. The concept of regionalization replaces the country-by-country, free or not-free status, with assigned levels of risks to parts of countries or groups of countries.

APHIS veterinarians and plant health specialists continue to work closely with foreign governments and industry, particularly in Mexico, Central and South America, the European Union, the Caribbean, Africa, Japan, Taiwan, Australia, and Korea, to protect American agriculture. APHIS personnel ensured the biological safety of animals, plants, and agricultural products coming into the United States through inspection and certification of foreign facilities, carriers, passengers, and cargoes. Commodity preclearance overseas provides the United States with additional protection against the introduction of exotic plant pests and diseases by detecting and eliminating pests at their origin. In fiscal year 1995, preclearance activities in Chile, a major supplier of winter fruits and vegetables to the United States and potential NAFTA member, remained stable at about 60 million cartons. APHIS maintained the current level of activities in the Dutch bulb program by inspecting over 1 billion bulbs in 1995.

In fiscal year 1995, the Agency maintained strong technical cooperation on bilateral international agricultural health with many countries and international agricultural health organizations including Food and Agriculture Organization, Office of International Epizootics, North American Plant Protection Organization, Inter-American Institute for Cooperation in Agriculture, and others. These activities resulted in the development of standards for risk analysis and pest free areas and in other institution-building achievements.

In fiscal year 1995, the Agency maintained strong emphasis on facilitating U.S. agricultural exports worldwide through bilateral discussions with several countries including Japan, Australia, Chile, New Zealand, Korea, and Taiwan. APHIS participated in negotiations related to the Uruguay Round of the General Agreement on Tariffs and Trade and the North American Free Trade Agreement, as well as the U.S./European Union and U.S./Mexico Working Groups on sanitary and phytosanitary issues. In support of this, APHIS attaches stationed abroad identify, negotiate, and eliminate technical zoosanitary and phytosanitary trade barriers that impede U.S. agricultural exports.

APHIS is working through multilateral organizations, such as the Organization for Economic Cooperation and Development, and bilaterally with our trading partners to develop an international harmonized regulatory process for agricultural products produced through the new techniques of biotechnology. The United States

is the world leader in developing new biotechnology products and APHIS works proactively to reduce the potential for technical barriers to trade in these products to maintain our competitive advantage.

The Trade Support Team (TST) continued to develop and implement the trade issue data tracking system which facilitates the management of technical trade issue negotiation priorities. The TST coordinates Agency participation in discussions over bilateral and multilateral Sanitary/Phytosanitary Standards (SPS) issues to maintain or expand markets for U.S. exports. It assisted the Department and the U.S. Trade Representative in resolving commodity disputes with foreign governments over SPS issues. It also continues to identify, develop and implement resolution processes for emerging trade issues through continuous contact with industry, foreign governments, and other U.S. agencies. Sales of \$120 million in apples and other fruit were maintained though negotiations with Taiwan and China.

APHIS is facilitating veterinary biologics trade negotiations by participating with the Food and Drug Administration in the negotiation of a Mutual Recognition Agreement (MRA) with the European Union to govern international trade in human and veterinary drugs and biological products. APHIS has presented a draft MRA to the European Union for consideration. The document proposes an approach to mutual recognition of overall quality assurance systems for veterinary biological products in the U.S. and Europe. APHIS is also participating in an international organization of veterinary drug regulatory authorities called the International Cooperation on Harmonization of Technical Requirements for the Registration of Veterinary Medicinal Products (VICH). The VICH includes members from the European Union, Japan, and United States and was formed to address international harmonization of technical requirements for veterinary drugs and biological products. Significant progress has also been made toward mutual recognition of testing and release of veterinary biological products between the United States and Canada. Future efforts will be focused on mutual recognition of inspection and harmonization of licensing requirements.

PROTECTING DOMESTIC AGRICULTURAL PRODUCTS

APHIS monitors animal and plant health to detect and react to exotic pests and disease introductions. The Agency creates and updates endemic pest and disease information bases and monitors and carries out survey activities in cooperation with States and industry. The Agency also surveys for exotic plant pests and investigates reports of suspicious animal pests and diseases. Early detection reduces their spread, helps eliminate significant losses, and helps maintain pest-free status for export certification of agricultural commodities. U.S. agriculture is currently free from hundreds of foreign pests and diseases. Survey data are essential for initiating action programs and result in better pest and disease management.

A recent example of detecting an exotic disease is Karnal Bunt. On March 8, 1996, Agricultural Research Service scientists confirmed the identification of Karnal Bunt in certified durum wheat seed produced in Southwestern Arizona. Karnal Bunt is a fungal disease of wheat, durum wheat, and triticale (a wheat/rye hybrid). Most of the infected seed has been planted on 12,000 to 15,000 acres in Arizona and New Mexico. A science panel met on March 14 to review the existing action plan and determine the steps that need to be taken to eradicate or contain this infestation. Infected properties, seed, and equipment are being placed under emergency quarantine and a trade team is developing options for maintaining U.S. export markets.

APHIS works with the States to compile two databases: the National Agricultural Pest Information System (NAPIS) and the National Animal Health Monitoring System (NAHMS). States enter the results of plant pest surveys directly into the NAPIS database, which includes crop hosts, location, weather conditions, pest life status, crop damage, survey and control methods used on certain pests, and trapping methods. Descriptive data about the occurrence and costs of animal health events are collected from a statistically valid sample of producers for the NAHMS database. NAHMS reports can be used by producers to improve health and production efficiency of livestock and poultry.

Regulatory enforcement activities prevent the spread of communicable animal pests and diseases in interstate trade. APHIS' regulatory activities enhance industry by keeping it healthy and free of pests and diseases. These activities include inspection, surveillance, animal identification, and prosecution. The Agency also investigates alleged violations of Federal animal welfare and horse protection laws and regulations and oversees and coordinates subsequent prosecution of violators through appropriate civil or criminal procedures.

The Agency maintains a cadre of trained professionals, prepared to respond immediately to potential animal and plant health emergencies. Reports of suspected exotic pests and diseases are investigated and emergency action is taken if necessary. The Agency develops pathway studies and investigates the progression of outbreaks to determine the origin of plant and animal pests and diseases.

APHIS conducted 270 investigations for suspected foreign animal diseases in fiscal year 1995. Also, the National Veterinary Services Laboratories (NVSL) supported animal disease prevention, detection, control, and eradication programs; and provided diagnostic assistance to the livestock and poultry industries. A total of 46,173 submissions were received and tested in fiscal year 1995.

In response to an outbreak of Vesicular Stomatitis Virus (VSV) in New Mexico, which began in May 1995 and continued into the fall of 1995, a total of 1,162 premises had been investigated. During the course of this outbreak, there were a total of 367 case positive premises consisting of 186 in New Mexico, 165 in Colorado, 1 in Arizona, 1 in Texas, 6 in Utah, and 8 in Wyoming. On January 15, 1996 VSV outbreak was declared eradicated.

Certainly the goal of the screwworm program is to prevent the reintroduction of the parasitic screwworm into the United States by eradicating this insect in Central America. The program has eliminated the pest from Mexico, Belize, Guatemala, and Honduras. Now Nicaragua is the focal point of eradication activities, bringing us ever closer to establishing a permanent sustainable sterile fly barrier zone in Panama.

MANAGING WILDLIFE CONFLICTS

Since 1985, the Federal Government's efforts to manage wildlife damage to agricultural and other resources have been centralized in APHIS' Animal Damage Control (ADC) which works to minimize the effects of wildlife on livestock and crops and to protect human health and safety from wildlife damage as well. In October 1994, ADC published its Mission and Strategy—a new strategic plan—which was the result of a long process involving a “futuring” exercise that began in 1991 and employees from all levels of the program. A need for increased public awareness of the extent and magnitude of wildlife damage problems was identified, as well as the need for socially acceptable and effective control methods. During 1995, ADC developed a customer service brochure for the program. This brochure explains the ADC purpose, mission, services, and standards. Published last April, the brochure has been provided to all employees for distribution to customers, stakeholders, and others who have an interest in the program. ADC has initiated the second phase of an evaluation to determine customer satisfaction. To learn if customers are satisfied with technical assistance services provided by ADC, approximately 2,000 technical assistance customers will be randomly sampled in fiscal year 1996 with the results being analyzed and published next year. A previous survey indicated that more than 90 percent of 1,650 direct control customers were satisfied with the level of service they received from ADC, and more than 96 percent of respondents stated that they believed their wildlife damage losses would have increased without ADC assistance. ADC has continued its interagency agreement with the National Agricultural Statistics Service (NASS) to determine the magnitude and extent of wildlife damage to various agricultural resources. In May 1995, NASS released the results of its survey to determine predator losses to the sheep and goat industry. Results indicated that predators killed 368,050 sheep and lambs during 1994, valued at \$17.7 million. Additionally, predators also killed 140,000 goats valued at \$5.5 million. Coyotes continued to be the largest single predator of sheep and goats followed by dogs. NASS also documented in the survey that both fencing and husbandry practices tied for the leading nonlethal control measures used during 1994, and farmers and ranchers spent an average of \$1.77 per breeding animal on nonlethal control compared to \$.50 for lethal measures. Assisting the livestock industry in minimizing losses to predatory animals continued to be one of ADC's major responsibilities.

Many avian and mammals species cause damage to food crops and livestock worth several hundred million dollars annually. Blackbirds and starlings regularly consume grain crops in all stages of growth, from sprouting seeds to mature crops. Affected crops include wheat, corn, rice, sorghum, and sunflowers. Fish-eating birds cause serious losses to catfish and other fish grown at aquaculture facilities. Mammals, such as deer, prairie dogs, gophers, and raccoons, also cause damage to a wide variety of food crops. Certain predators cause significant damage to the livestock industry by killing or injuring sheep, goats, cattle, poultry, and other kinds of livestock. ADC activities include providing control and technical assistance to reduce and eliminate the losses. ADC continued to provide assistance, with full reimbursement, to John F. Kennedy International Airport in New York City to reduce bird

strikes to aircraft. This was the fifth consecutive year APHIS has conducted operational gull control at the airport. As a result of these efforts, laughing gull bird strikes at the airport have been reduced by approximately 75 percent. On average, there are over 5,000 bird strikes with civilian and military aircraft annually in the United States. A military aircraft crash on September 22, 1995 at Elmendorf Air Force Base, Alaska, resulted from the aircraft's two left engines ingesting several Canada Geese, destroying the aircraft and killing all 24 crew members.

The first building of a state-of-the-art research facility for the National Wildlife Research Center (NWRC) was completed in January 1995 on the foothills of Colorado State University campus in Ft. Collins, Colorado. The new facilities, being completed as part of a master plan for NWRC, will allow for the future relocation of all Denver Wildlife Research Center headquarters activities to Ft. Collins. The initial research emphasis will be on developing attractants and repellents, a research area that promises to produce new, effective, and socially acceptable wildlife management methods.

CONTROLLING EXISTING PEST AND DISEASE PROBLEMS

As a testament to APHIS' cooperative efforts with producers and the States, many of our disease eradication programs are nearing successful eradication. We have reached a major milestone in the Cooperative State-Federal Brucellosis Rapid Completion Plan by bringing the total number of quarantined herds in the United States down to a record low of 50. Brucellosis is a contagious, costly disease of livestock that also affects humans, and we are approaching the end of a 62-year program to eliminate it from this country. This program is a shining example of Federal and State governments and the industry working together to achieve shared goals. We congratulate the industry on their tremendous efforts to further this program, and we encourage their continued cooperation as we approach our goal of full eradication by the end of fiscal year 1998. Full eradication will improve our international livestock markets by eliminating certain remaining trade restrictions. One of the most significant success stories in this program is that of Arkansas. Several years ago, Arkansas was downgraded in its brucellosis infection status because of persistent infection. The producers, however, have been able to turn the situation around in record time. The State now enjoys Class A status, and within 1 year, should be declared free of the disease. Like us, the cattle industry has been concerned about the increasing risk of bison in Yellowstone National Park transmitting brucellosis to animals in the surrounding States that are free of the disease. We recently reached an agreement with other Federal agencies and Montana State officials on an interim management plan, which is now in effect. The plan will decrease the need for lethal control methods conducted by State officials and also reduce the risk of brucellosis spread. In addition, the involved agencies have committed to developing a long-term bison management plan.

The boll weevil eradication program has been extremely successful in improving cotton yields and reducing production costs in the eradicated areas. Two separate economic studies indicated that once boll weevil eradication was accomplished, there was an estimated yield increase of at least 69 pounds per acre, pesticide savings of at least \$30 per acre, and land value increases of \$14 per acre. Cotton yield data evaluations show that, with a few exceptions, these savings and increased yields should be similar in all cotton producing States. Of the 16 cotton growing States, all have legislative authority to have referenda to conduct a boll weevil eradication program, except New Mexico. Four States: Arkansas, Louisiana, Missouri, and Oklahoma have not had referenda to decide whether to participate in an eradication program.

Significant progress is being made toward the final eradication of bovine tuberculosis. Currently, 43 States are accredited free, and only 3 cattle and bison herds and 5 captive cervid herds remain under quarantine. One of our proudest achievements in the eradication program this year has been the significant decrease in the number of Mexican-origin cattle identified as tuberculous at slaughter. During fiscal year 1995, there was a 64-percent decrease over the previous fiscal year in the number of tuberculosis cases in imported Mexican feedlot animals. This occurred despite the fact that more Mexican cattle entered this country—about 1.6 million—in fiscal year 1995 than ever before. This is evidence that the Mexican tuberculosis program is progressing and that our ban on Holstein imports is effective.

The California Medfly eradication program is nearing a very successful completion. APHIS and the State of California would continue the Medfly eradication program under an area-wide method suggested by an international team of fruit fly scientists. In this area wide approach, which began in 1994, the program releases sterile Medflies and enforces regulations throughout the entire Los Angeles Basin. Ster-

ile fly releases were successfully completed in early March. Final trapping and quarantine of the Los Angeles Basin is scheduled to end July 31, 1996.

IMPROVING ANIMAL TREATMENT

In September 1995, an internal strategic planning team convened to review APHIS' animal protection enforcement and compliance activities, including not only basic statutory and regulatory authorities under the Horse Protection Act and the Animal Welfare Act (AWA), but also educational initiatives, the inspection system, law enforcement, case prosecution, technological and scientific needs, and resource management. The review focused on areas of continuing public concern, including: regulation of commercial dog breeders; prevention of pet theft; effectiveness of the current performance-based standards and research facilities' internal oversight committees; treatment of elephants and other exotic exhibit animals; and the care of captive marine mammals. Several initiatives now underway demonstrate APHIS' commitment to leadership and partnering efforts in the animal care arena, including a collaborative project with the Scientists' Center for Animal Welfare to review the effectiveness of research facilities' internal oversight committees and the current performance-based standards. To help reduce duplication and make better use of existing Federal and State resources, APHIS also has worked with the U.S. Animal Health Association's Animal Welfare Committee to develop "model legislation" for drafting State animal welfare laws. The Agency has a memorandum of understanding with Missouri, which administers its own animal welfare program, to exchange inspection information. APHIS is currently working out a similar arrangement with the American Kennel Club. APHIS has developed a customer service plan that places top priority on answering complaints, as well as facilitating dissemination of documents. The team proposed that public meetings be held to solicit input on a variety of issues. These meetings are scheduled to take place in 1996 in Washington, D.C.; St. Louis, Missouri; and Kansas City, Missouri. It was recommended that APHIS conduct more focus groups—similar to the one at Tufts University that is currently evaluating USDA pain-classification categories for research animals—and use related research techniques to obtain a balanced view of public concerns about animal welfare. To improve service delivery, the program plans to hold a national work conference for Animal Care employees in May 1996, which will cover topics like customer service, inspection quality, and interpersonal skills.

STREAMLINING TO IMPROVE SERVICE DELIVERY

As part of the Marketing and Regulatory Programs mission area, APHIS has made significant progress in implementing its reorganization and streamlining decisions. These decisions were made to consolidate administrative services, thereby reducing costs and improving customer services. APHIS now provides all personnel, procurement, and finance services for the MRP mission area. The streamlining goals are on target as well; APHIS will exceed reduction goals in all categories including the number of supervisors, supervisory ratios, administrative specialists, and GM 14's, 15's, and Senior Executive Service for fiscal year 1996 and is well on the way to meeting the fiscal year 1999 goals.

Regional consolidation is our effort to further align ourselves with USDA's streamlining initiatives. APHIS will collocate field offices as part of the Department's goal to consolidate and share office space. Based on the recommendations from the Regional Consolidation Design Team, in August 1995, the APHIS Management Team decided on a consolidation option that will result in a two-site regional structure. Our goal is to complete consolidation efforts by the end of fiscal year 1999. In the meantime, we are moving to close and consolidate field offices whenever possible. In fiscal year 1995, 14 field offices were closed. APHIS is committed to cutting costs, eliminating redundancies, and ensuring that field delivery services are of the highest quality and exceed customer expectations.

FISCAL YEAR 1997 BUDGET REQUEST

The current law request proposes \$464 million for salaries and expenses, compared to the fiscal year 1996 current estimate of \$458.7 million, which reflects an increase of \$26.8 million for AQI inspection funded through user fees, under the authority of the fiscal year 1996 Appropriation Act. Of the proposed amount, \$125 million would be derived from AQI user fees. The budget requests \$3.2 million for buildings and facilities to fund APHIS' share of the Plum Island Animal Disease Center modernization. The request also proposes \$5 million for the contingency fund and a new Medfly item for \$10 million to fund a preventive program of sterile fly releases to prevent large outbreaks. This prevention program in California would begin soon after the current emergency is completed and will be a cooperative 50-

50 cost-sharing effort. Besides the aerial release of sterile flies, the program would include detection and identification activities. The preventive release program would require fewer sterile flies and less trapping than an eradication program and no regulatory activity. The program would be reevaluated after five years. This period of time will allow strengthening of exclusion efforts as well as development and improvement of technologies and protocols that minimize the risk of Medfly introduction. In addition, the budget proposes legislation to provide authority for collecting \$7.5 million of user fees for selected activities in animal welfare, biotechnology, and veterinary biologics.

APHIS proposes to establish a revised budget line-item structure for plant health and international activities that more accurately describes funding based on the functions performed. In addition, we propose to group import/export inspection and international programs under a sub-heading called "sanitary and phytosanitary standards," the main function of those programs and to underscore their importance to facilitating agricultural exports. APHIS also proposes to merge scrapie into the animal health monitoring and surveillance item because it primarily funds monitoring and surveillance work. APHIS proposes to display the cattle tick and tropical bont tick under the Pest and Disease Exclusion component of the budget since these programs work to keep our country free from these pests.

CONCLUSION

APHIS' future will not be a predictable extension of today. The demands of the future will not permit us the luxury of savoring our past accomplishments or stopping our pursuit of improved performance and quality. We have a proud history of consistently adapting ourselves to meet an ever-changing set of demands. We value the qualities of being innovative, creative, and problem solvers and are committed to these qualities as we move forward.

We appreciate the Committee's strong support of our programs in the past, and look forward to meeting the challenge of protecting and strengthening American agriculture in the future. We will be happy to answer any questions.

PREPARED STATEMENT OF LON S. HATAMIYA

Mr. Chairman and Members of the Committee, I am pleased to have this opportunity to represent the Agricultural Marketing Service—AMS—and to present our fiscal year 1997 budget proposals.

MISSION

Before I discuss our agency's budget proposals, I would like to review our agency's mission, funding sources, and recent accomplishments. The mission of the Agricultural Marketing Service is to facilitate the strategic marketing of agricultural products in domestic and international markets, while ensuring fair trading practices, and promoting a competitive and efficient marketplace. We believe our programs help to create more efficient markets which benefit agricultural producers, processors, and consumers.

FUNDING SOURCES

AMS is unique in that we generate revenue from our customers for about three-quarters of our activities. We operate all of our Marketing Services programs and the Federal/State Market Improvement program on less than \$50 million in appropriated funds. Administrative costs for commodity purchase services and marketing order oversight are funded from Section 32 customs receipt funds. The rest of our programs, which have a program level of \$173 million, are completely financed by those directly benefiting from our services—through user fees for voluntary grading services and reimbursements by the segment of industry or individuals served. Since AMS must constantly monitor costs to retain voluntary customers, we strive to increase our cost-effectiveness in all of our activities, and monitor customer needs to maintain customer satisfaction.

INTERNATIONAL MARKETING

In response to the changing needs of our customers, we have been changing our programs' focus to reflect a more global approach to marketing services. We believe we have a key role to play in helping U.S. agriculture to develop international trade opportunities. Secretary Glickman has stated that "...trade and exports are the future for American agriculture." Agricultural exports set a record high of \$54.1 billion in fiscal year 1995 and are expected to increase again this year by almost 10

percent. The U.S. produces agricultural products that are desirable to foreign consumers, and the lowering of trade barriers is making international trading easier. However, with more access, the competition will intensify. The U.S. must also compete with aggressive foreign government-supported export marketing. USDA's long-term strategy for agricultural trade focuses on global market opportunities. Market intelligence and market development are two important components for achieving that goal. Since AMS' mission is to improve the efficiency of U.S. agricultural marketing, we recognize the importance of expanding international trading, and understand the problems and uncertainties the smaller U.S. traders may face in looking for export markets. To support USDA's international mission and in response to industry requests, AMS has directed a limited amount of its current resources to facilitate international trading. Our market news program has begun providing timely and accurate trading information on selected foreign markets. Market information such as current prices and volume traded is particularly crucial to small and medium-sized producers who would not otherwise have access to foreign market data, or could only receive it at high cost. Market news reporters collect the information through cooperative exchanges with foreign contacts.

AMS is providing technical assistance through USDA's Emerging Democracy program in countries that are moving to free market economies. We have assisted in developing their market information systems; their quality grade standards; and their transportation, marketing, distribution, and storage systems. These market-building efforts will help provide more open and efficient foreign markets that will be receptive to U.S. farm exports.

AMS commodity experts are representing U.S. interests in meetings and participate in the development of international standards. The standards being developed for agricultural products will provide a common language for commerce. Our participation ensures that international standards do not create a disadvantage for U.S. shippers and growers in foreign markets, and that U.S. products will be able to meet the standards developed. For some commodities, AMS' user-funded quality grading and certification services are frequently used to support export commerce by verifying for foreign buyers that the product meets contract purchase specifications.

To further assist exporters, AMS organized ten export transportation seminars across the U.S. during fiscal year 1995. These seminars provided first-time exporters with an understanding of the international transportation system and how it affects product marketing, cost, and quality. AMS also worked with other USDA agencies and private industry to organize and conduct two comprehensive conferences on exporting agricultural products to Mexico, held a livestock export workshop program to educate new or potential livestock exporters and foreign buyers, and produced a video and publication that follows a U.S. agricultural shipment from the field to the final overseas market through each stage of the process. Finally, with the Foreign Agricultural Service and Cornell University, AMS conducted a national survey of agricultural exporters to find ways to improve USDA customer service, identify challenges facing agricultural exporters, and evaluate the effectiveness of existing export programs.

DOMESTIC PROGRAM ACCOMPLISHMENTS

AMS programs continue to work to improve domestic marketing. I will quickly highlight a few of the agency's recent accomplishments in domestic programs.

Organic Certification

AMS is proceeding with the development of the Organic Certification program, which is slated for completion this year. The National Organic Standards Board—composed of growers, processors, consumers, environmentalists, a retailer and a scientist—has prepared recommendations on more than 60 substances for the initial national list of allowed synthetics and prohibited natural substances for use in organic production and processing. The Organic Standards Board will complete its review and recommendations for the national list this year. AMS expects to publish the rule for accreditation of certification agents and for production and processing standards this fiscal year.

Organic food production is a dynamic industry with rapidly advancing technology. When the Organic Food Production Act of 1990 was enacted, there were approximately 2,800 organic producers. Five years later, the number has doubled and is still growing. The program being developed will address a number of problems facing the marketing of organic products. Those problems include: the fraudulent use of the term "organic"; consumer confusion about the term; variations of standards and requirements among the private and State organic certifiers; the use of "organic" for multi-ingredient processed products; the lack of reciprocity among cer-

tifiers; and, foreign importers requiring excessive documentation before accepting U.S. products. Establishment of national standards governing the marketing of certain agricultural products labeled as organically produced will facilitate interstate and international commerce, and will provide consumers the information they need to make informed choices.

Farmers' and Public Markets

Our Wholesale Market Development program studies and promotes market access to small to medium-sized growers through improvement of market facilities. The program includes auction and collection markets, retail farmers' markets, and urban markets. About 30 percent of the produce sold in the U.S.—a retail value estimated at \$19.5 billion—passes through a wholesale or collection market. Recent emphasis has been on expanding direct marketing of agricultural products through farmers' markets in or near metropolitan areas to provide greater access for the small grower, more nutritious fresh food to the urban poor, and to create jobs. Direct marketing is a key outlet for agricultural products produced by the small farmer. A 1993 Cornell University report estimated total U.S. direct-to-consumer sales of fruits and vegetables through farmers' markets at \$1.1 billion annually. AMS is conducting research to determine the feasibility of using central-city historic structures to market more fresh agricultural products to the urban poor. In many cities supermarkets have closed, leaving the urban consumer with limited and often costly sources of fresh agricultural products.

Pesticide Data Program

In response to public concerns about agricultural commodities, we have modified and improved our Pesticide Data program. The number of commodities and residue tests performed by the Pesticide Data program continues to grow as fruit and vegetable, grain, and milk samples are collected and tested using objective and statistically reliable methods. The program addresses many of the recommendations of the National Academy of Science report, "Pesticides in the Diets of Infants and Children." The report recommends that pesticide residue monitoring programs target foods highly consumed by children. Sixteen of the commodities tested are considered high consumption commodities of infants and children. Our program already met the report's recommendations that standard laboratory methods be validated and subject to strict quality assurance programs. Ten States now participate in the program: California, Colorado, Florida, Michigan, New York, North Carolina, Ohio, Texas, Washington, and Wisconsin. Wisconsin was added this year for milk. During fiscal year 1995, the program tested 46 pesticides of interest to EPA in fruits and vegetables and 23 in wheat. The program performed approximately 49,000 analyses on over 8,000 samples. Seventy-seven percent of the program's funding this year will be directly disbursed to the States, with another 10 percent used for selected analyses that the States agreed were best performed in a Federal laboratory. AMS' expert knowledge of commodities and marketing, in combination with established State resources, results in highly effective and efficient program operation. State inspectors collect domestic and foreign fruits and vegetables close to consumers—at large U.S. distribution centers, terminal markets, and State warehouses. The ten participating States collect milk samples at fluid milk plants or direct outlets based on State fluid milk production and plant size. The milk sampled represents 56 percent of the Nation's production. The Grain Inspection, Packers and Stockyards Administration collects and analyzes wheat samples based on State and monthly production data. The resulting data is not only used by the EPA for dietary risk assessments, pesticide reregistration issues, and pesticide reviews, it can also be effective in addressing perceptions concerning the safety of the food supply and help support the marketability of U.S. agricultural commodities in foreign markets. These data demonstrate that the Nation's food supply is one of the safest in the world.

Perishable Agricultural Commodities Act

Congress and this Administration achieved an historic breakthrough with the enactment of amendments to the Perishable Agricultural Commodities Act, or PACA. The amendments, approved in November 1995, ensure the continuation of PACA and bring needed reforms and financial stability to the program. Without PACA, the produce industry would lose millions of dollars due to unfair practices in the marketplace, and these losses would be passed on to consumers. The PACA program prohibits misbranding or misrepresentation of fruits and vegetables, provides a forum for resolution of reparation complaints dealing with contract disputes, and contains a trust provision that gives a statutory lien to growers and traders in fruits and vegetables for unpaid products in the event of insolvency or bankruptcy by the buyer. The program, which is financed solely through license fees, saves millions in litigation costs and associated delays.

Field Offices

AMS continues to close or consolidate field offices where appropriate to contain costs while maintaining or improving services. AMS closed 14 field offices in fiscal year 1995 and we plan to close 5 field offices in fiscal year 1996. To satisfy customer requirements for reasonable fees and to respond to changes in agricultural marketing, AMS has closed 46 percent of its offices since fiscal year 1982. We locate our field offices at locations near customers who request and pay for our services, and on or near markets to speed reporting. Decisions to close or consolidate offices follow careful consideration of productivity, operating costs, location, and the number of customers served.

FISCAL YEAR 1997 BUDGET REQUEST

This year, we will continue to improve our ongoing program activities. We are requesting increased funding only for our Pesticide Recordkeeping program. Congress mandated the program in 1990 to ensure that private applicators of Federally restricted use pesticides maintain records comparable to those required of certified commercial applicators. In fiscal year 1995, AMS provided financial support to 18 State agencies to inspect private applicator records and provide information to applicators on the requirements of recordkeeping regulations and the benefits of accurate records. Twenty States have their own regulations governing recordkeeping by certified private applicators. In fiscal year 1996, we will continue our educational activities and cooperative efforts to promote recordkeeping in the cooperating States—now about 20—and the 20 States with pesticide recordkeeping programs. Most of the remaining States have indicated that they do not intend to enter into agreements with AMS.

For fiscal year 1997, AMS requests an increase of \$1.2 million so that we can either establish cooperative agreements or extend educational and compliance monitoring activities to the remaining 12 States, three U.S. territories, and at least one Indian Governing Body. With these funds, pesticide recordkeeping inspections will be carried out in the 12 States. AMS will provide funding to the territories and Indian Governing Bodies to conduct recordkeeping educational programs for private certified applicators and begin recordkeeping inspections. We will also support and monitor the recordkeeping programs in the States that have their own recordkeeping requirements for certified private applicators. The funding requested will help to further the educational and inspection activities in those 20 States. With the requested level of funding, AMS will be able to provide national coverage for the recordkeeping program as mandated by the legislation.

LEGISLATIVE PROPOSAL

We are proposing authorizing legislation that will allow AMS to collect assessments for the oversight of marketing agreements and orders. The Secretary issues marketing agreements and orders in response to requests by a majority of producers in a given marketing area. They are administrated locally by marketing order committees and market administrators whose costs are funded from assessments on regulated producers and handlers. Federal oversight and administrative support for these programs is funded from the Section 32 permanent appropriation. AMS proposes to recover Federal costs through increased assessments paid by the producers and handlers who benefit from the agreements and orders. We estimate that this proposal will result in savings of \$10.6 million, offset in fiscal year 1997 by one-time liabilities costs of about \$500 thousand, for a net savings of \$10 million in the first year.

BUDGET REQUEST SUMMARY

In total, our 1997 budget request includes \$48.3 million in appropriated funding for our marketing services programs, \$1.2 million for Payments to States and Possessions, and \$16.7 million from Section 32 funds for administration of commodity purchase services and marketing agreements and orders. Approval of the legislative proposal to charge user fees for marketing agreements and orders would reduce our request by \$10 million for a total of \$56.2 million appropriated funds.

Thank you for the opportunity to present our budget proposals.

PREPARED STATEMENT OF JAMES R. BAKER

Mr. Chairman and members of the Committee, I am pleased to submit the Grain Inspection, Packers and Stockyards Administration's (GIPSA) fiscal year 1997 budget proposal.

GIPSA was established under the authority of the Department of Agriculture Reorganization Act of 1994. The Agency's services and programs facilitate the marketing of livestock, poultry, meat, cereals, oilseeds, and related agricultural products for the overall benefit of consumers and American agriculture. The Agency carries on the traditions of service, integrity, professionalism, and fairness that characterize its component programs.

GIPSA's Grain Inspection program plays a critically important role in facilitating the marketing of U.S. grain and related commodities. We provide the U.S. grain market with Federal quality standards and a uniform system to apply these standards. Through this program, GIPSA provides descriptions (grades) and testing methodologies for measuring the quality and quantity of grain, rice, edible beans, and related commodities, and, provides an array of inspection and weighing services, on a fee basis, through a unique partnership of Federal, State, and private laboratories.

By serving as an impartial third party, GIPSA ensures that the standards are applied and the weights recorded in a fair and accurate manner. Our presence in the market advances the orderly and efficient marketing and effective distribution of U.S. grain and other assigned commodities from the Nation's farms to domestic and foreign buyers.

Our guidance in carrying out these important tasks is provided by the U.S. Grain Standards Act (USGSA) and the Agricultural Marketing Act of 1946 (AMA) as it relates to the inspection of rice, pulses, lentils and processed grain products. Under these two acts, GIPSA:

1. Establishes official U.S. grading standards and testing procedures for eight grains (barley, corn, oats, rye, sorghum, triticale, wheat, and mixed grain), and four oilseeds (canola, flaxseed, soybeans, and sunflower seed) under the USGSA; and for rice, lentils, dry peas, and a variety of edible beans under the AMA.

2. Provides American agriculture and customers of U.S. grain around the world with a national inspection and weighing system that applies the official grading and testing standards and procedures in a uniform, accurate, and impartial manner.

3. Inspects and weighs exported grain and oilseeds. Domestic grain and oilseed shipments, grain and oilseed imported into the United States, and crops with standards under the AMA are inspected and weighed upon request.

4. Monitors grain handling practices to prevent the deceptive use of the grading standards and official inspection and weighing results, and the degradation of grain quality through the introduction of foreign material, dockage, or other nongrain material to grain.

Through these permissive and mandatory programs, the Grain Inspection program promotes efficient and effective marketing of U.S. grain and other commodities from farmers to end users.

To better illustrate the impact and efficiency of the Grain Inspection program, consider the following: USDA's "Outlook for U.S. Agricultural Exports" reports that in fiscal year 1995, U.S. exports of wheat, corn, coarse grains, rice and soybeans were valued at approximately \$18.7 billion. During the same fiscal year, GIPSA, which operates on a user fee basis, collected fee revenue of \$27 million for official inspection and weighing services for these exports. These revenues are less than 0.2 percent of the total value of the exports.

We remain committed to improving the efficiency and effectiveness of our grain inspection and weighing programs, and to adding value to American agriculture. In fiscal year 1997, GIPSA's commitment to improved efficiency and effectiveness will be even more valuable to American agriculture as U.S. agricultural exports are expected to reach a record \$60 billion, exports of wheat, corn, coarse grains, rice and soybeans are expected to account for \$22.7 billion ("Outlook for U.S. Agricultural Exports," February 1996).

GIPSA's Packers and Stockyards Programs provides financial protection and promotes fair business practices and a competitive marketing environment for livestock, meat, and poultry. Our programs foster fair and open competition, and guard against deceptive and fraudulent practices affecting the movement and price of meat animals and their products. GIPSA also works to protect consumers and members of the livestock, meat, and poultry industries from unfair business practices. To carry out these important roles, GIPSA's Packers and Stockyards Programs:

1. Administer the Packers and Stockyards Act of 1921.

2. Carry out the Secretary's responsibilities under Section 1324 of the Food Security Act of 1985, which permits States to establish "central filing systems" to prenotify buyers, commission merchants, and selling agencies of security interests against farm products, and issue regulations and certify the systems that meet the criteria in the statute.

3. Enforce the Truth-in-Lending Act, the Fair Credit Reporting Act, and the Freedom of Information Act as each relates to persons and firms subject to the P&S Act.

GIPSA's Packers and Stockyards personnel work continuously to respond and adapt to changing conditions in a dynamic and complex industry.

The production and marketing of livestock, meat, and poultry are important to American agriculture and significantly impact the Nation's economy. The Commerce Department estimates the annual wholesale value of livestock, meat, and poultry products to be approximately \$95 billion. At the close of fiscal year 1995, there were 1,386 stockyards; 7,078 market agencies/dealers; and 2,103 packer buyers registered with P&S to engage in the livestock marketing business. There were also approximately 6,500 slaughtering and processing packers; an estimated 6,900 meat distributors, brokers, and dealers; and an estimated 240 poultry firms subject to the P&S Act.

ORGANIZATION

GIPSA is comprised of approximately 812 total staff years, including full-time, temporary, and intermittent employees. GIPSA personnel are situated in field locations across the country to serve our customers.

In fiscal years 1994 and 1995, GIPSA streamlined and consolidated its field structure from 44 to 34 field locations. The result: fewer, but better staffed and equipped field offices. The restructuring, which primarily impacted the grain inspection program, improves the performance of the national grain inspection and weighing system, helps to contain the costs to users of the system, and enhances service delivery. New monitoring and quality control methodologies are being employed to enhance oversight of the national inspection system with a leaner organizational structure.

Federal grain personnel work with over 2,000 State and private inspectors to provide high-quality inspection and weighing services on a user-fee basis. Federal inspectors service 46 export elevators located in Georgia, Illinois, Indiana, Louisiana, Maryland, New York, Ohio, Oregon, and Texas. A small Federal staff also provides service at 6 export elevators in Eastern Canada for U.S. grain transshipped through Canadian ports. Eight delegated States provide services at an additional 21 export elevators located in Alabama, California, Minnesota, Mississippi, South Carolina, Virginia, Washington, and Wisconsin. Sixty-six designated agencies service the domestic market under GIPSA supervision. In 1995, this unique mix of Federal, State, and private inspection agencies provided 2.6 million inspections on an estimated 260 million metric tons of grains and oilseeds.

P&S has 11 offices strategically located throughout the United States to monitor compliance with the P&S Act. These offices have 11 to 14 employees each and consist mainly of auditors, marketing specialists, scales and weighing specialists, and clerical support personnel.

CURRENT ACTIVITIES

The national grain inspection and weighing system continues to provide accurate and cost-effective services to its customers. In fiscal year 1995, official personnel performed nearly 2.6 million official inspections, 600,000 protein and oil tests, 100,000 mycotoxin tests, and a variety of other services. We're not resting on our accomplishments. We are reaffirming our commitment to facilitating the marketing of U.S. grain by responding to our customers' needs and providing the highest quality grain inspection and weighing services to all of our customers—from farmer to domestic and international end users, and all those in between. The program also is taking steps to ensure confidence in the quality and value of American grain, and is aggressively positioning itself to meet the challenges of the future.

GIPSA is strengthening its focus on providing high quality service to our customers. In fiscal year 1995, GIPSA developed our first customer service standards. The standards pledge that our customers can expect courtesy and respect, fairness, clarity, accessibility, timeliness, and responsiveness. We will continue to seek our customers' views, listen to their needs, and take action based on them, including updating and refining our customer service standards.

We have maintained our focus on excellence in delivering our services and programs to our customers. In November 1995, GIPSA initiated a one-year pilot program to gather information on the impact of introducing competition into the official system and on ways to eliminate some restrictions faced by the grain industry and official agencies. Specifically, the pilot will measure the effect of allowing more than one designated official agency to inspect or weigh grain in a single area. The pilot program should result in the grain industry receiving faster service at a lower cost and it is already improving service to some of our customers.

GIPSA is continuing its review of issues related to the importance of test weight standards for Soft Red Winter wheat and the market's use of this information. A number of Soft Red Winter wheat producers have voiced support for lowering the

test weight grading standards because they believe the grain market assesses unfair discounts for low-test-weight wheat. An evaluation conducted by the USDA Economic Research Service (ERS) concluded that market pricing is established by competitive market forces and not the official wheat standards. Nevertheless, the percent of Soft Red Winter wheat grading U.S. No. 1, which averages 26 percent, is substantially lower than other wheat classes such as Hard Red Winter wheat, which averages 64 percent grading U.S. No. 1. Furthermore, scientific evidence shows a poor correlation between test weight and end use quality, which raises questions as to the value of test weight to processors. GIPSA will further evaluate the testing methodologies for measuring test weight to determine if changes are needed and also will continue to encourage the development of end-use value tests for wheat.

GIPSA continues to actively cooperate with the National Conference on Weights and Measures (NCWM) to develop testing and calibration programs for grain moisture meters and near infrared (NIR) wheat protein analyzers for commercial trade. In fiscal year 1995, GIPSA continued to serve as an authorized moisture meter evaluation laboratory under the NCWM's National Type Evaluation Program (NTEP). This ongoing cooperative effort between GIPSA and the NCWM on standardizing commercial grain inspection equipment has resulted in the recognition of five commercial moisture meter models under NTEP. The data collected by GIPSA to support calibration evaluation and improvement for these five models will enable moisture meter manufacturers to develop calibrations to significantly improve the consistency among commercial grain moisture meters.

GIPSA also is working to maintain worldwide confidence in the quality and value of U.S. grain exports. In February 1995, GIPSA prohibited the application of water to grain except for milling, malting, or other processing operations. The prohibition applies to all grain handlers, not just those receiving official inspection and weighing services. GIPSA determined that water, which is sometimes applied to grain as a dust suppressant, can be too easily misused to increase the weight of grain. Externally applied water also has a significant potential for degrading the quality of grain. The prohibition fosters the marketing of grain of high quality to both domestic and foreign buyers, promotes fair and honest weighing practices, and helps ensure a strong market for U.S. grain exports.

Finally, GIPSA's Grain Inspection program is taking aggressive steps to position itself to meet the challenges of the future. The program is working on a long-term improvement process to strengthen the program's organizational culture by making quality and customer service priorities. The result will be a national grain inspection and weighing program that quickly and effectively meets the changing needs of our customers in the United States and a global marketplace.

The Packers and Stockyards Program continues to provide payment protection to livestock and poultry producers by focusing on the financial area.

Dealer failures continue to represent a significant amount of unrecovered losses in the livestock marketing chain. During the last fiscal year, 16 dealers/order buyers failed owing \$1.6 million for livestock—only \$430,000 of which was recovered. Because of these losses, GIPSA has proposed amending the P&S Act to provide for a statutory dealer trust similar to the packer trust for cash sellers of livestock. The dealer trust would require livestock inventories and accounts receivable due from the sale of livestock to be held in trust for unpaid cash sellers when a dealer fails to pay for livestock. The proposed trust would help reduce losses to livestock sellers when dealers fail financially.

Because of continuing concern about the integrity of custodial funds, GIPSA is conducting frequent on-site audits of all custodial accounts. During the past four years, livestock consignors, in most cases, have recovered 80 percent or more of their losses when auction markets failed financially. During fiscal year 1995, seven auction markets failed financially owing \$750,000 for livestock. Of that amount, \$311,000 was subsequently recovered from bonds and other sources.

The statutory trust provisions of the P&S Act have been very successful in recovering losses as a result of failures by meat packers and live poultry dealers. During fiscal year 1995, livestock producers were paid \$1 million by 8 packers under the statutory trust provisions. Over the past 5 years, more than \$10.7 million has been received by livestock producers under the trust provisions.

During fiscal year 1995, poultry producers were paid \$1 million by four poultry processors under the statutory trust provisions. Since the P&S Act was amended in 1987, poultry producers have received over \$7.1 million under the poultry trust provisions.

In addition to fulfilling its payment protection responsibilities, the livestock marketing program investigates fraudulent practices, with key priorities being investigating false weighing, weight and price manipulation, switching of livestock, and misrepresentation of the source, origin, and health of livestock.

Because competition for livestock should be open and free of restrictions, GIPSA closely monitors livestock marketing. Any practice, agreement, or understanding that excludes potential buyers from bidding in open competition is considered a restraint on competition. Examples of such practices include apportioning territories, price agreements or arrangements not to compete, and payoffs or kickbacks to buyers.

The packer and poultry program assures prompt and full payment to livestock and poultry producers; fosters open and fair competition in the procurement of livestock by packers; prevents unfair, discriminatory and deceptive practices in contract poultry growing arrangements; and prevents noncompetitive practices in the marketing of meat and meat products. GIPSA gives high priority to ensuring payment for livestock through bonding, solvency tests, and the packer trust, which has helped reduce losses to producers selling livestock on a cash basis to slaughtering packers.

The poultry provisions to the P&S Act give similar protection to poultry growers and producers through statutory trust and payment provisions. The \$1 million worth of statutory trust payments to poultry producers in fiscal year 1995 is a good indication of the importance and effectiveness of this program.

GIPSA conducts extensive weighing investigations in the livestock area. Economic and competitive pressures on individuals and firms engaged in livestock marketing may contribute to falsifying weights to improve income. During fiscal year 1995, 10 percent of the 868 formal weighing investigations disclosed false or questionable weighing. The percentage of these cases has remained relatively constant for the past few years.

Also in the livestock area, GIPSA actively participates with the National Conference on Weights and Measures and the National Institute of Standards and Technology in developing standards, specifications, and tolerances for livestock, poultry, and carcass scales. GIPSA personnel also develop training programs and provide training for State weights and measures officials, private scale testing companies, and scale users.

To ensure that slaughtering packers are actively competing for their slaughter requirements and not engaging in any illegal trade practices, GIPSA has increased the frequency and sophistication of its investigative and surveillance efforts. In addition, the Agency has been conducting semiannual investigations of hog slaughtering firms that use electronic evaluation devices as part of their purchasing programs to ensure that the devices are being used in a fair and accurate manner. Through these investigations, GIPSA can assure producers that the devices are accurate and properly operated.

Livestock producers and other segments of the livestock and meat industry remain concerned about meat packer concentration, packer feeding, and forward contracting. GIPSA continually reviews industry structural change and market performance, and monitors the percentage of cattle owned or controlled by packer firms prior to slaughter (captive supplies) through special reports collected from the top 15 steer and heifer slaughterers each year.

The study of concentration in the red meat packing industry, originally funded in the fiscal year 1992 Appropriations Act, has been completed. The study included seven projects which examined: regional cattle procurement markets, the effects of concentration on prices paid for fed cattle, how cattle prices are determined, the implications of vertical coordination in hog production, a review of research literature on competition in the meat packing industry, the role of captive supplies in beef packing; and, hog procurement in the Eastern corn belt. This study will be used by the Agricultural Concentration Advisory Committee established by the Secretary. This Committee, funded at \$50,000 in fiscal year 1996, was tasked by the Secretary to gather information and review evidence of concentration throughout the agricultural sector and provide recommendations for possible actions to ensure competitive agricultural markets. We look forward to their recommendations, which are expected in June.

Overall, the study depicts a meat industry that is complex and dynamic. Information appears to flow rapidly and freely among regions, encouraging a national market for cattle and hogs, in which forces of supply and demand largely determine behavior of market participants. The findings suggest that there is no systematic geographic price discrimination, market segmentation, or territorial market allocation. Traditional procurement and pricing methods are still the predominant method for livestock procurement. However, alternative methods, such as forward contracts and marketing agreements are important. Prices paid for cattle obtained through forward contracts were lower than prices in the spot market while prices for cattle obtained through marketing agreements were higher. No definitive findings were generated on the impacts of national concentration on prices for slaughter cattle. Nevertheless, the research raised an awareness of potential problems that could arise.

The care and handling of livestock at stockyards has received considerable attention from the media and special interest groups. GIPSA has advised all stockyards operating in the United States of their responsibilities concerning the care and handling of livestock. We also have completed an investigation of all stockyards to determine whether their services, facilities, and procedures for receiving and handling livestock are adequate to prevent injury, death, or other avoidable loss. The program to investigate stockyard handling practices and procedures is ongoing to assure future compliance.

In administering the clear title provisions of Section 1324 of the Food Security Act of 1985, GIPSA has certified 19 States' central filing systems as of February 1996.

During fiscal year 1997, GIPSA will continue to expand the functionality and performance of its existing Wide Area Network. A key priority will be obtaining additional network software to allow for a seamless interface between the Grain Inspection and P&S programs networks. The main focus of the automation effort will be to make the Agency more efficient and productive in performing its functions.

FISCAL YEAR 1997 BUDGET REQUEST

Under current law, GIPSA's total budget request for fiscal year 1997 is \$67.8 million, of which \$24.6 million represents appropriations. The remaining \$43.2 million represents user fee authority for inspection and weighing services.

For fiscal year 1997, the President's budget proposes a total program level for grain inspection of \$54.3 million, with \$11.1 million appropriated for compliance, standardization, and methods development activities. The fiscal year 1997 budget also proposes legislation to authorize the collection of \$3.6 million in new user fees to cover the costs of grain standardization activities.

For P&S programs, the budget proposes \$13.5 million, which includes an increase of \$225,000 to allow GIPSA to establish electronic filing procedures for annual reports, which is consistent with the requirements of the Paperwork Reduction Act of 1995; \$480,000 for activities in the packer market competition area which will aid the Agency in fostering fair and open competition, and guarding against deceptive and fraudulent practices which affect the movement and price of meat animals and the products therefrom; and \$550,000 for industry structure and performance surveillance to strengthen and expand GIPSA's capability to monitor the competitive implications of structural changes and behavioral practices in the meat packing industry, and to support legal actions that require complex economic and statistical analyses.

The fiscal year 1997 budget also proposes legislation to authorize the collection of license fees to administer all activities under the P&S Act. All meat packers, live poultry dealers, stockyard owners, market agencies, and dealers, as defined in the P&S Act, would be subject to the license fees. Also included is a request to provide for a legislative proposal regarding a statutory dealer trust to require livestock inventories and accounts receivable due from the sale of livestock to be held in trust for unpaid cash sellers when a dealer fails to pay for livestock.

CONCLUSION

Mr. Chairman, this concludes my statement. I appreciate the opportunity to testify on behalf of one of USDA's newest agencies. I will be happy to answer any questions the Committee may have.

BIOGRAPHICAL SKETCH

MICHAEL V. DUNN

Michael V. Dunn was sworn in as Assistant Secretary of Agriculture for Marketing and Regulatory Programs on Dec. 28, 1995, after being confirmed by the full Senate on Dec. 22 as assistant secretary and member of the Commodity Credit Corporation board of directors.

Dunn manages the three U.S. Department of Agriculture agencies responsible for many aspects of the marketing, protection, quality and transportation of the nation's food, feed and fiber supply. Those agencies are the Agricultural Marketing Service, the Animal and Plant Health Inspection Service and the Grain Inspection, Packers and Stockyards Administration.

Prior to this appointment, Dunn served as Acting Under Secretary for Rural Economic and Community Development at USDA. He was also Administrator of USDA's Farmers Home Administration.

Before joining USDA in November 1993, Dunn was vice president of the National Farmers Union, in charge of its Washington operations. Prior to that, he worked for

Senator Patrick Leahy on the Senate Agriculture Committee. He is a former commissioner of the Iowa Development Commission and was executive director of a regional planning and economic development district. He also served as a city official in his hometown of Keokuk, Iowa, and as Midwest director for USDA's Farmers Home Administration from 1977 to 1981.

STATEMENT OF MICHAEL DUNN

Senator COCHRAN. I am going to now recognize and call on Michael Dunn, who is the Assistant Secretary for Marketing and Regulatory Programs.

Mr. DUNN. Thank you, Mr. Chairman, members of the committee. I am pleased to appear before you and to discuss the activities of the marketing and regulatory programs of the U.S. Department of Agriculture for fiscal year 1997 budget proposals.

With me today are Dr. Lonnie King, Administrator of the Animal and Plant Health Inspection Service; Mr. Lon Hatamiya, Administrator of the Agricultural Marketing Service; and Mr. James Baker, the Administrator of the Grain Inspection, Packers and Stockyards Administration.

Kiddingly, I will note the lapel pin, Mr. Chairman, as a shameless attempt to influence the ranking member. It says, "Arkansas, A Natural State" on it.

MARKETING AND REGULATORY MISSION

We have prepared written statements, and we would like to submit them for the record. The mission of the marketing and regulatory programs is to facilitate the domestic and international marketing of U.S. agricultural products to ensure the health and care of animals and plants.

These activities improve market competitiveness and the economy of the overall benefits for both consumers and American agriculture.

In 1995, the American agriculture producers benefited through our broad international activities, through cooperative exchanges of information between the United States and countries in Europe, Canada, Mexico, and Asia. We provided a critical market news information to U.S. producers who want to take advantage of these markets.

To assure low risk in spreading pests and disease, we issued 274,000 phytosanitary certificates covering exports of \$24 billion in plants and plant products. These exports required our point of origin certificates for approximately 700,000 head of livestock, 28 million live poultry, 49 million hatching eggs, 7 million doses of semen, and 14,000 embryos.

For grain, we collected \$27 million to provide official inspections and weighing services, a mandatory service for the \$18.7 billion of exports of wheat, corn, course grains, rice, and soybeans.

We also monitored 1,385 stockyards, 7,100 market agencies and dealers, 6,400 meatpackers, and 2,100 registered packer buyers in an effort to provide payment protection to livestock and poultry producers.

Firms subject to the Packers and Stockyard Act handled products valued at \$96 billion in 1994. Our animal damage control efforts helped farmers and ranchers who faced losses caused by wildlife

predators to nearly 370,000 sheep and lambs and 140,000 goats in 1994, valued at over \$23 million.

We served the broader American public by inspecting approximately 63 million travelers at U.S. airports and other ports of entry, an increase of 1 million over 1994. We also provided assistance to airports like JFK International in reducing bird strikes by approximately 75 percent.

In the area of animal welfare, we investigated and resolved 550 complaints and conducted nearly 14,400 license and registrants inspections.

We also conducted approximately 49,000 residue analyses for 62 pesticides on over 8,000 samples of fruits and vegetables.

As you can see, the marketing and regulatory programs of the USDA are important contributors to the economic well-being of American agriculture.

For the 1997 budget, we are requesting current law appropriations of \$538 million to fund \$781 million of marketing and regulatory program activities. The remaining \$243 million will be collected as fees for serving users.

Senator BUMPERS. How much was that, Mr. Dunn?

Mr. DUNN. The remaining \$243 million will be collected as fees for serving users.

The appropriations request is \$8.4 million more than the current estimate for 1996. We will submit legislation in the near future to authorize the recovery of an additional \$24.6 million in license and user fees.

APHIS HIGHLIGHTS

Now I would like to highlight the agency budget request. The Animal and Plant Health Inspection Service [APHIS] is responsible for protecting U.S. animals and plant resources from disease and pests.

APHIS leads the way in anticipating and responding to issues involving the introduction of destructive foreign plant and animal pests and diseases by monitoring and disseminating information regarding plant and animal pests and diseases, conducting programs to prevent, detect, and eradicate harmful pests and disease, developing methods to control animals and pests that threaten agriculture or constitute a public health or safety hazard, and ensuring that warm-blooded animals used for research, exhibition, or sold wholesale as pets receive humane care and treatment.

In APHIS' funding, we are requesting a current law appropriation of \$464 million for salaries and expenses for 1997. That is an increase of \$5 million from the 1996 current estimate. Of the proposed amount, \$125 million would be derived from AQI user fees from international travel and transit operators.

We are requesting \$10 million to fund new programs to combat reinfestation of Medfly. This will be a preventive effort and will rely heavily upon the release of sterile flies to suppress reinfestation of the Medfly in the current United States. The State of California would continue to cooperate in this effort.

The budget would also include a legislative proposal to provide authority to collect \$7.5 million of users fees for selected activities in biotechnology, veterinary biologics, and animal welfare.

AMS HIGHLIGHTS

Under the Agricultural Marketing Service, the fundamental mission of AMS is to facilitate the strategic marketing of agriculture products, ensure their fair trade practice, and promote a competitive and efficient marketplace.

The AMS program enables the private sector marketing systems to provide food and other agricultural products more efficiently with greater dependability, lower economic cost, and higher equitable treatment among the participants.

AMS activities include the dissemination of market information, development of grade standards, many of which are used for voluntary grading programs funded by user fees, protection of producers from unfair market prices, random testing of commodities for pesticide residue, oversight of industry-funded programs to promote agricultural products, research and technical assistance aimed at improving efficiency of food marketing and distribution.

AMS also administers marketing agreements and orders at the national level and purchases commodities that support our domestic feeding programs.

A marketing opportunity of growing importance to the small farmer is the market of organic food. In 1990, when the Organic Foods Production Act was enacted, approximately 2,800 producers were producing organic agricultural products. At this time, we estimate that that number of these producers has doubled, and it is still growing.

The National Organic Standard Board has prepared recommendations to the Secretary on how to implement the act, and now AMS is currently evaluating those recommendations and developing a proposed rule for publication this fiscal year.

Through the pesticide data program, AMS continues to provide the Environmental Protection Agency data needed to conduct dietary risk assessment, pesticide reregistration, and pesticide reviews.

The analysis uses state-of-the-art techniques and generally showed pesticide levels substantially below established tolerances.

AMS FUNDING

The Agricultural Marketing Service funding for the 1997 budget request includes a current law appropriation of \$48.3 million for the Marketing Service programs and \$1.2 million for the Federal/State marketing improvement programs.

The budget proposes an increase of \$1.2 million to expand educational in compliance activities for the pesticide recordkeeping program for the 12 States without such a program.

We are also proposing legislation to recover \$10.6 million for the cost of Federal oversight of marketing agreements and orders. These costs will be collected through increased assessment, paid by producers and handlers who benefit from the programs.

GIPSA HIGHLIGHTS

Under the Grain Inspection, Packers and Stockyards Administration, which was established on October 20, 1994, under the authority of the Department's Reorganization Act of 1994 to administer

the programs and functions of the former Federal Grain Inspection Service and Packers and Stockyards Administration.

The agency's programs and services promote a competitive, efficient marketing structure and facilitate the marketing of grains, oilseeds, rice, livestock, meat, and poultry in domestic and international markets.

The agency establishes official U.S. standards for grains, official weighting and inspection activities, and inspection of rice, dried beans and peas, processed grain products, and hops.

The agency also provides assurance of the financial integrity of the livestock, meat, and poultry markets. The agency monitors competition and protects producers, consumers, and the industry from deceptive and fraudulent business practices that affect the meat and poultry prices.

In February 1995, GIPSA implemented a prohibition on adding water to grain. This prohibition was in response to domestic and international customers' concerns that water is often applied, not to suppress dust for safety and air quality purposes, but to increase the weight of grain and thereby gain an advantage.

The study of concentration of the red meat packing industry was mandated in 1992 by the Appropriations Act, and its scope and focuses were developed under the leadership of then Secretary Ed Madigan.

The study was conducted under contract with a number of land-grant colleges and the Economic Research Service. It was released in February 1996, and copies were made available to the committee.

We appreciate the foresight in making this study a reality. It provides a snapshot of a dynamic and changing industry. While it lays a solid foundation of new information, many important questions remain unanswered.

As a result, Secretary Glickman has established a 21-member advisory committee on agricultural concentration. The members represent producers, industry, economists, and other representatives of the agriculture community.

They will be developing recommendations for possible actions to ensure competitive agricultural markets by June 1996, and they have just wrapped up their second meeting held in St. Louis.

GIPSA FUNDING

In GIPSA's funding, we are requesting a current law appropriation of \$24.6 million for fiscal year 1997. The 1997 budget proposes legislation to authorize the collection of \$3.6 million in new user fees to cover the cost of grain standardization activities and \$13.5 million for license fees to cover all of the packer and stockyards activities.

For P&S programs, the budget proposes an increase of \$1.4 million to develop electronic filing procedures, increased investigations of deceptive and fraudulent practices, and increase analysis of industry structure and performance for actions that require complex economic and statistical analysis.

I thank you for the opportunity to present this budget for the marketing and regulatory programs. We believe the budget proposes funding amounts and sources that will assure the successful

accomplishment of the Department of Agriculture's mission to serve our customers, the industry, consumers, and the general public.

We will be happy to answer any questions, Mr. Chairman.

Senator COCHRAN. Thank you, Mr. Secretary.

I am going to reserve my opening statement and questions and let my friend from Montana make any comments or ask any questions he would like to at this time.

PREPARED STATEMENT

Senator BURNS. Thank you, Mr. Chairman. I would just ask if I might have my statement inserted in the record because I kind of wanted to hear from the people here.

Senator COCHRAN. So ordered.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BURNS

Thank you, Mr. Chairman.

I appreciate your calling this hearing today to meet with those people who are responsible for the safety of our food and the marketing of our agricultural products. I am extremely interested in this issue, as I am sure all Americans are, with the recent news from our European friends. There are a great number of programs that fall under the authority of the people, seated before this committee today, and I am interested in hearing their testimony.

I am also interested in bringing up several areas of concern I have with the operation and authority of the people before us today. I have concerns with the safety of our food supply and the standards that have been set by the Department of Agriculture, and I am very concerned about the trend of recent developments regarding the agencies under the Assistant Secretary for Marketing and Regulatory Programs.

I have always been a strong proponent of the Animal and Plant Health Inspection Service. I have, and will continue to take my boots off when entering the country so that any risk of contamination can be washed from the soles of my boots. I appreciate the work that they have done and are doing to make sure that the risk to our animals and plants is as small a risk as possible. However I am concerned with recent developments in relation to the authority that this agency has within our country and even more so, within the administration itself. At a recent hearing before the Energy and Natural Resources Committee, I was astonished to hear that the agency feels they have the authority to deal with the Yellowstone National Park bison herd, infected with brucellosis, and yet have done nothing substantial to deal with the problem of this infected herd.

I am also concerned with the cost that the APHIS, and Animal Damage Control are being forced to inherit due to the introduction of wolves into Yellowstone National Park. It appears to me, through discussions I have had in Montana, that the cost of the wolf introduction program is partially being forced upon the APHIS. This I cannot understand or tolerate.

We have all been fielding a call from our livestock, especially beef, producers lately dealing with the low price of cattle on the market. It is very hard for a producer to survive with \$30 cows, and with the continuation of this trend it makes it even more difficult for many to see the light at the end of the tunnel. In response to an outcry from Congress the Packers and Stockyards Administration studied the concentration of packers and stockyards in the nation. Just this month the results of the study were released, and another commission appointed to study the results of the study. I was disturbed with the selection of the people on that commission, since only one state in the west was represented and there seemed too little or no representation of cow calf operators which supply the product to feedlot operators. I am very interested in seeing what the criterion for the selection of this commission was.

With the completion of the conference on the Agriculture Transition Act, we have seen our agricultural producers move into a market oriented world. With this as a result of the process, we have seen an end to the time when a producer can drop their grain through the grates at the local elevator and walk away from the product of their labor. We are going to need to be prepared to assist the producer in marketing their products on the market. The producer is going to need to prepare them-

selves to continue their work effort after the product is in the elevator or terminal. The work will continue until the time that the product is in the consumers home.

Mr. Chairman, this will be an exciting year for the future of agriculture. I am very interested in learning how the Department of Agriculture is looking into the future to assist our agricultural producers. I look forward to hearing from the Department witnesses here today.

Thank you, Mr. Chairman.

ANIMAL DAMAGE CONTROL AND MARKETING CONCERNS

Senator BURNS. I have some concerns, and I think everybody knows what they are, especially this group here, because my letters get read down there, I understand.

We still have a problem with animal damage control and the cost on the wolf reintroduction in our part of the country. I am still concerned about the protein analysis and determination of grains moving out of this country.

You know we went through a little thing with the elevators. And at Portland we could not get the shippers to agree, the elevators to agree, with the same analysis whenever it gets to Portland blending.

I am wondering in the areas—and here is where it is very, very important. The bison is still bothering me, Dr. King. Whenever we take a look at what can happen, and all we have to do is look east across this little creek, and find out when we do not do things, what happens. And that is what we are setting on.

And I will fight for money for you, and I will even take off my boots every time I come back into this country and you can spray me down, whatever, if I have to be dipped, I do not mind that, because I know the importance it is for the livestock industry and also over in the horticulture part of it, too, in the plant industry.

But I am also interested in the growth in the area of grains and fruits that are being grown outside the realm of what we are used to, too.

So with that, I am just going to put my statement in. If I have some questions, I will ask you. I have another place to go to and some work to do today, but I am still concerned about that. And if we do not deal with it, if we do not deal with it, it could explode.

And I will tell you the 15th of every April, the shrimp boats come in in this town, but we only get paid once a year. If we go through a devastation in the health of our livestock or our grain, we do not get paid. And that is the difference. And I find it—I take it very, very seriously.

So with that, I thank the chairman. And what you are asking for in money, I will support all the way, because I think it is very important.

Now these guys in the marketing business over there with \$60 fat cattle and \$30 butcher cows, they are not doing anything for the health.

Baker, you have to get with it. You just cannot sit there and look, just between you and I. [Laughter.]

Mr. BAKER. I have eaten all those I can eat, sir. [Laughter.]

Senator BURNS. Me, too. But thank you for your comments today.

CERTIFICATION OF POULTRY EXPORTS TO RUSSIA

Senator COCHRAN. Thank you, Senator.

I was very pleased to see the protocol and the agreement with the Russians which has been finalized on the poultry export issue.

I understand that there is an additional protocol to the U.S. veterinary certificate that accompanies all poultry exports that is made a part of this agreement. That is an undertaking, I suppose, on our part that is part of the agreement.

My question is whether or not this has any budget implications. Will there be a cost associated to the Department or to FSIS for this additional veterinary protocol?

Mr. TAYLOR. This should not have any budgetary impact, Mr. Chairman. We do recover our costs of providing the certification service, so we are reimbursed for that. It should not have any budget impact.

1996 SUPPLEMENTAL APPROPRIATIONS REQUEST

Senator COCHRAN. OK. I notice the request for meat and poultry inspection operations for next year is less than that requested for this year.

Yet, for this year, you came in and asked for a supplemental because you did not have enough money to fund this year's operations. Explain that one to me.

Mr. TAYLOR. I would be happy to, Mr. Chairman. The President requested for fiscal 1996 an appropriation of \$595 million, which would have included, among other things, funds to fill several hundred of the vacancies that exist in our current system.

We have attrited over the years to a point where we have as many as 700 or more vacancies in the current system, as it has traditionally been designed.

We sought funding to fill several hundred of those. That funding, as well as other elements of what was requested, was not provided in the appropriation. Our 1996 appropriation was \$545 million.

We made a conscious decision to no longer seek funds to fill the vacancies, but rather to seek just what we needed to maintain adequately the current inspection activity and make some modest investments in the modernization and the improvement of the system for the future. We believe that we need \$9.5 million in addition to the \$545 million to meet those needs as we try to transition to the future.

So it is to make up part of the shortfall, and the difference between what we requested and what was appropriated.

REDUCTION IN POULTRY PRODUCTION

Senator COCHRAN. Let me ask you this: We were reading in the papers back in my State that poultry producers are cutting back production by 7 percent to respond to the fact that corn prices are high, consumption is down.

The fact is that if you do not produce as much, or if you do not process as much, I guess you do not need as many inspections.

Is there any correlation between a cutback like that and the need for inspectors or to costs incurred by the FSIS?

Mr. TAYLOR. At some point there could be some incremental impact. I think we would have to assess over time whether in fact cutbacks in production are permitting us to meet inspection obligations with fewer inspectors.

It has not, certainly in the short term, had that effect. We will certainly be taking a look at that and, as it evolves, provide the chairman with information.

INPLANT STAFFING

Senator COCHRAN. Do you see any difficulty in maintaining fully staffed operations and plants with inspectors under the current funding level available to FSIS for the balance of this year?

Mr. TAYLOR. We do anticipate difficulty. We have been operating our system increasingly in a very austere way with our inspection force stretched thin. In order to meet the obligations that we have to cover slaughterlines with inspectors in order to keep production going, we have been borrowing inspectors from processing assignments.

We have been taking people out of floor inspection positions within slaughter plants, and we have been putting those people on the lines.

We have been using up at a rapid rate the inventory of other-than-permanent inspector hours that we have. So we are already stretched very thin.

I think that without some additional resources, we will encounter continued difficulty and of course have some very painful choices to make about how to manage the program and how to maintain one of the very critical investments that we worked through with the Congress last year. That is our field automation initiative, a 5-year program, with appropriated funds specifically earmarked, to put this tool in the hands of our inspectors, and it is going to be absolutely essential to implementing the modernized system of the future.

We are confronted with some enormously painful choices, and obviously we are making every effort to staff the slaughterlines.

That is costing the system a great deal. It has already made us vulnerable to the claim that we are not meeting the obligation to conduct daily inspection in processing facilities.

So we anticipate a difficult remainder of the year, Mr. Chairman.

Senator COCHRAN. My expectation is that the conference report that is being finalized right now will have in it a directive in bill language that there should not be any closing down of inspection activities in slaughter or processing plants.

This will require, as I read it, you to make adjustments in spending in other areas to offset any shortfalls that you might perceive in this area.

Do you have any problem complying with a directive of that kind?

CURRENT INSPECTION SYSTEM AND MODERNIZATION EFFORTS

Mr. TAYLOR. We will comply fully, Mr. Chairman, with the legislative directives that we receive. That captures our dilemma that I referred to in my opening remarks. We have the dollars to keep doing what we have been doing under the current system. We will follow the directives to do that.

We have already, in response to the appropriation that we received, eliminated a large array of investments and initiatives to improve the program. And we have taken other austerity meas-

ures, which include continuation of a freeze on noninplant hiring and restrictions on travel and other operating expenses.

We are down to the only remaining reservoir of funds that could begin to fill this gap, that being the funds that were earmarked specifically by Congress for our field automation initiative.

Field automation is so important—it is not just computers for inspectors; it is part of the long-term strategy to modernize this system, to replace a system and an approach that was invented 90 years ago with one that is really science based. We are really equipping our inspectors to do what I think we all agree they should be doing, which is taking a more sophisticated, more efficient and productive science-based approach to their work.

We have about \$4 million left for field automation that was going to be used to continue this 5-year implementation strategy.

We will follow legislative directives, of course, but it captures the dilemma that we all want to move forward, but we cannot move forward without making some of these investments.

I think the only place we would have to go is to that pool of money. From a very important management standpoint, I am concerned about this first year, when we are just getting this program rolling. We have worked extremely hard to convince our work force that they have to change. We are going to change. We are going to move to a fundamentally different system.

The work force understands that. They are ready. They want to get on with it, and they see the automation initiative as a sign of the future. They are serious. We are going to change this program.

My concern about having to take those funds at this stage in order to keep current operations going the way we have done all these many years, is that it would be a very powerful signal to our work force that we are not serious about change, that all this talk about change is just talk.

That is the dilemma. I know that the budget's reality is harsh and real, and I understand the dilemma that you have, Mr. Chairman. But that is our problem. Obviously, we will do whatever we need to do to meet the legislative directives.

COLD TREATMENT CAPABILITIES

Senator COCHRAN. In connection with the APHIS budget request, Dr. King, I understand you are evaluating cold treatment capabilities at a number of ports of entry. One of those is in Gulfport, MS, I am told.

And I understand that this is the second time that several of these ports, including the one at Gulfport, have been evaluated for cold treatment.

What constitutes a qualified cold treatment capability, and why does it take so long to get this analysis completed?

Dr. KING. I will try to get a more detailed explanation, in terms of how that is done. I do know that the request is there. Other ports also are making similar requests, as we look at imports coming in.

On the particular one for Gulfport, I will find out immediately if that is on schedule and what the followup is, Senator. I will provide this information for the record.

[The information follows:]

COLD TREATMENT REQUIREMENTS

APHIS authorizes the cold treatment of fruits from specified countries of origin; rigid adherence to specified temperatures and time periods effectively eliminates certain insect infestations on imported fruit. Regulation 7 CFR 319.56-2d Administrative Instructions for Cold Treatments of Certain Fruits discusses the treatments authorized and the place and manner of treatments. Cold treatment facilities also require barriers and safeguards that prevent the introduction of fruit flies and other insect pests into the United States in the unlikely event that they escape from shipments of fruit before undergoing cold treatment. Ports are assigned to a risk group based on a number of criteria, including the individual port's latitude, microclimate, immediate host availability, and past fruit fly infestations.

Gulfport, Mississippi, has been evaluated to allow the approval of a cold treatment facility. Because of the southern location of the port, there is an increased risk of fruit fly escape due to the possibility of untreated fruit warming up to temperatures that would allow any insect pests that may be in the fruit to become more active. Therefore, in addition to the requirements in 7 CFR 319.56-2d (b)(5)(i) through (b)(5)(iii) the following requirements would apply:

1. All fruit entering the port for cold treatment must move in maritime containers; no bulk shipments would be allowed;
2. Within the container, the fruit intended for cold treatment must be enclosed in fruit fly-proof packaging that prevents the escape of adult, larval, or pupal fruit flies;
3. Containerized shipments of fruit requiring cold treatment would be restricted to movement within the port and treated within the area over which the Bureau of Customs is assigned authority;
4. APHIS and the cold treatment facility must agree in advance on a restricted area defined according to host material, time of year, and safeguards, in which shipments are allowed to move between the vessel on which they arrived at the port and the cold treatment facility;
5. Advance reservations for cold treatment space must be made prior to the departure of a shipment from its port of origin;
6. Unloading of fruit from the container into the cold treatment facility must be done within the cold treatment facility, and untreated fruit may not be exposed to the outdoors under any circumstances;
7. The cold treatment facility must remain locked during non-working hours;
8. Fruitfly trapping methods must be used within the cold treatment facility and within the 4 square miles surrounding the cold treatment facility;
9. During cold treatment, a backup system must be available to cold treat the shipments of fruit should the primary cold room malfunction and the facility must also have one or more cold holding rooms and methods of identifying lots of treated and untreated fruit;
10. The cold treatment facility must have the ability to conduct methyl bromide fumigations on site and the site must be approved by APHIS; and,
11. The cold treatment facility must have contingency plans, approved by APHIS, for safely destroying or disposing of fruit.

POULTRY PROCESSING PILOT TESTS

Senator COCHRAN. I have some other questions. I am going to defer my questions and ask my colleague from Arkansas if he has any comments or questions to please proceed.

Senator BUMPERS. Just one or two questions, Mr. Chairman. I thank you.

Mr. Taylor, I have been told by some of the poultry industry in my State that there is a company called Stork Gamco Co. that has developed a new processing technique.

Apparently, there are tremendous efficiencies with it, but FSIS has not approved it and indeed has said that it results in a higher instance of salmonella.

Are you familiar with this?

Mr. TAYLOR. Yes, I am.

Senator BUMPERS. Would you like to discuss it?

Mr. TAYLOR. I would be delighted to.

Senator BUMPERS. Let me put it this way: Was the finding of salmonella levels higher than would normally be in the range for such a test? Just give us a status report on what you did and what the salmonella levels were compared to the present techniques for processing.

Mr. TAYLOR. We have criteria that we use to evaluate new technologies such as this, and, of course, systems like this do not come along every day. It is an important and innovative system that certainly does have some substantial production efficiencies and may also have some advantages from a product quality standpoint.

Our criteria specify that companies must generate data to show that, from a microbiological standpoint, this new system is equal to or better than the traditional system or one for which it would substitute.

This involves doing various trials and experiments involving the equipment and collecting data.

The data that were generated indicated that in comparison to the traditional systems, this equipment improved microbiological quality from the standpoint of certain nonpathogenic indicator organisms.

With respect to salmonella, including incidents of contamination and percentage of contaminated carcasses, whereas the traditional system was reducing the percentage of contaminated carcasses, the data suggested that this system was actually increasing the percentage of contaminated carcasses.

These data do not prove or disprove that the system is causing an increase of adverse food safety effects. Clearly, a system that was actually increasing salmonella contamination, in comparison to the traditional one, would be of concern to us.

These data raise a question that we feel must be resolved, and in all likelihood, we would hope can be resolved, with some additional studies and some additional tests.

We do not feel that it would be appropriate, or consistent with our criteria or our obligation to the consumer, to approve a system that, based on the data we have in front of us, appears to be increasing salmonella contamination.

Senator BUMPERS. Are you still involved in this? Are you involved in the testing?

Mr. TAYLOR. Yes, sir; we have been working throughout this process with the company's people.

We have invested a lot of our resources in overseeing the pilot tests, and working with the company more recently to deal with this very specific salmonella issue. We will continue to do that.

COST OF HACCP INSPECTION SYSTEM

Senator BUMPERS. Let me ask you one other question and I will yield. And this is sort of, I guess, an elementary way to phrase the question. But on a carcass-for-carcass basis, what is the cost to FSIS of the new technique versus the old of inspecting poultry?

Mr. TAYLOR. I am not sure I understand the question in terms of what new technique you are referring to, Senator.

Senator BUMPERS. Well, you have this new scientific method of inspecting poultry, for example, that is supposed to decrease the in-

cidence of salmonella contamination. Are we together on that so far?

Mr. TAYLOR. In terms of our HACCP proposal, our new regulations coming out, yes, sir.

Senator BUMPERS. As I understand it, this is going to be a different inspection system from the one we have had in the past. We are not going to do away with inspectors, and we are not going to do away with the personnel that are going to be required in these plants. And I am for it.

Do not misunderstand me. I mean, anything that will reduce the level of salmonella on carcasses is a highly desirable thing.

All I am asking is: For this improved system of inspection, how much more is it going to cost or is it?

Mr. TAYLOR. We are not asking for additional funds to implement this system. Our strategy is to redeploy the inspectors that we have.

We believe that within this HACCP framework we can fundamentally improve, through changing what our inspectors do, the contribution that each of them makes to food safety as they oversee HACCP and begin to look at safety issues that arise on the slaughterline, elsewhere in the plant, or outside of the plant.

We are going to undertake pilot studies of alternative deployments of our resources beginning later this year.

STATUS OF HACCP IMPLEMENTATION

Senator BUMPERS. You do not have this system in place anywhere right now.

Mr. TAYLOR. No, sir; we have in place the traditional approach to line inspection that has been substantially unchanged for decades.

Senator BUMPERS. And for the time being, are you still experimenting with it? I mean, are we going to have a double inspection system in some of these plants as you experiment with this new system?

Mr. TAYLOR. No, Senator Bumpers, we are not. We are going to issue in the very near future regulations that will establish HACCP, this process control framework, for the operations of slaughter and processing plants. There is going to be some time before plants are required to implement it.

One of the things we will be doing in that interim period is designing how we will cover that new system with our current inspection resources.

But we are very, very determined and it is very clear that, we cannot simply keep doing what we have been doing historically and successfully implement HACCP. That is why we are overhauling all of our existing regulations. That is why we have to look at this very basic issue of how we deploy our inspectors.

This is being done in a very integrated and planned manner, so that when HACCP is actually required to be implemented, then we will be in the process of changing the deployment of our inspectors.

FOOD SAFETY EMPHASIS IN HACCP INSPECTION

One very important point that I just have to stress is that much of the line inspection activity that goes on in a poultry slaughter establishment, for example, does not relate to safety.

It relates to the wholesomeness of the product. Are there diseased animals being presented? And, of course, we have a carcass-by-carcass inspection mandate whose purpose is to see that only healthy animals are offered for food.

HACCP is about safety. HACCP will address the safety issues that arise in slaughter, including salmonella and other bacteria, including some animal diseases that affect safety. By and large, animal disease is not a human health problem in poultry.

So HACCP does not take care of the objective of the current system to deal with diseased animals. That does not mean we can maintain the status quo in how we deal with diseased animals, because we believe there are much more efficient ways for us to see that that objective is met as well.

That is a critical objective of these inspection pilots that we are going to undertake. We want to take some of the inspectors that are sorting animals for wholesomeness and disease purposes and have them devote their efforts to higher priority food safety tasks and leave to the establishments more acceptance of the responsibility to do this initial sorting of diseased animals from healthy animals.

MARKETING ORDER USER FEE

Senator COCHRAN. In looking at some of the other budget proposals being covered at the hearing today, I know we have some Agricultural Marketing Service issues. One is marketing order user fees.

I notice there are several proposals throughout the budget requests for the marketing and regulatory agencies submitted which assume that there may be user fees imposed by Congress that would contribute to the operation of these agencies.

In the case of the marketing order user fee, has there been any submission to your knowledge, Mr. Hatamiya, of the legislation that would actually have to be approved by Congress to authorize these user fees?

Mr. HATAMIYA. Mr. Chairman, in regard to the marketing order user fees, the legislation was submitted last session as it has been submitted, I think, for about the last 10 years. It has not yet been approved and we are submitting it again. I believe the current legislation was submitted last year.

Senator COCHRAN. I see. Well, it probably indicates a disposition on the part of Congress not to impose user fees. So the continued assumption that these user fees are going to be approved and can be used to help pay the cost of the operation of AMS is probably wishful thinking, would you not say?

Mr. HATAMIYA. Well, about 80 percent of our operating budget is received through user fees. We believe the benefits to the industry in many of our programs should be paid by the industry. That is the motivation behind the introduction of this legislation once again.

The marketing orders currently pay for their own internal costs. As you are well aware, marketing orders are administered by the industry at the local level.

They are run by committees of growers in many parts of the country, and their administrative costs are already paid through the assessments. What we are proposing is just to have them pay for the Government, or the AMS and USDA oversight as well through those same assessments.

ORGANIC STANDARDS

Senator COCHRAN. I notice in the prepared statement there is an indication that the Agricultural Marketing Service is evaluating the recommendations of the National Organic Standards Board and developing a proposed rule for publication this year. What is that about?

Mr. HATAMIYA. Mr. Chairman, the 1990 farm bill mandated the establishment of a national standard that defined what organics really meant. It is more than a standard—it is actually the whole production process.

Over the last 6 years—really over only the last 2 years, since we have had appropriated dollars to implement this program—we have worked with the National Organic Standards Board to come up with recommendations on establishing that national definition of organic production.

We received the Board's recommendations at the end of 1995 and are in the process of establishing the implementing regulations. We hope shortly to have a proposed rule.

BOLL WEEVIL

Senator COCHRAN. Dr. King, you may have found out by now that farmers in northeast Mississippi voted to kill the boll weevil eradication program up there. What effect will that vote have on the eradication program, not only in the State of Mississippi but in other States as well? Have you had an opportunity to assess that?

Dr. KING. Mr. Chairman, right now I would say that we are disappointed. That was the buffer zone that was going to lead us further westward. So that is somewhat of a setback for us.

Our role in that program is one of expertise, of coordination and also to capitalize equipment for that important program. So my concern is that we are right at the brink to keep moving westward and I thought there was some momentum.

There are some new efforts in Texas going on and some referenda there. Now we are going to slide back a little bit and put the barrier in Alabama, where we still have a little more work to do. We are going to have to make another assessment of what that really means.

We also lost the referendum in the Lower Rio Grande Valley a little bit earlier this year. We need to work with the foundations and pick ourselves up and move this program ahead. It is an important program, and it certainly has a lot of cost-benefits for us.

Senator COCHRAN. One of the special factors, I think, in the referendum was the invasion of most of those cotton-growing areas by

the beet armyworm and the tobacco budworm, which caused extensive damage throughout the State.

We had some crops that were 100-percent losses and others where enormous sums were spent fighting those pests. But, still, the yields were not enough to justify the costs that were expended. So it was a sure enough disaster.

My own view is that had it not been for that, we might not have had that result. What is your estimation of the science being developed on this subject so that more information can be made available to growers in other areas where you might have a similar attitude situation?

Dr. KING. We are working with ARS to reevaluate use of the product, malathion, to kill boll weevils and the potential of eliminating some beneficial insects. We need to look at the potential impact.

We have never seen such high levels of boll weevil invasions, along with severe drought conditions which occurred this past year. It was really a poor year to make an assessment of the value of the use of the pesticide in the eradication program. Certainly in the Rio Grande Valley, tremendous drought conditions occurred this past year.

These factors have to be looked at together: use of the pesticide along with climatic conditions. We also need to understand the benefits associated with boll weevil eradication which are increased land values, 70-pounds-per-acre increase in production, and a 90-percent reduction in pesticide use.

You have to look at the long-term gains regarding boll weevil eradication. We will work with ARS and look at any new approaches to boll weevil eradication.

BACILLUS THURINGIENSIS [BT] COTTON

Senator COCHRAN. One of the new genetic improvements, I understand, is BT cotton. It is a long word that I cannot pronounce that BT stands for, but the whole point is that this cottonseed grows cotton that is resistant to pests that normally trouble cottongrowers.

With the advent of BT cotton, is the need for the boll weevil eradication program still present?

Dr. KING. We have evaluated the *Bacillus Thuringiensis* gene, that has been inserted in cotton.

We know that it works on certain types of caterpillars. Companies have been reluctant to invest the money into commercialization of this product as long as the boll weevil eradication program was going well. In other words, they were assessing if there really is a market here.

We know, scientifically, that a BT strain of cotton can be resistant to boll weevil. We also have to think about buffer zones across northern Mexico as a potential market.

So, if we continue to have setbacks in the eradication program, we need to look at genetically engineered cottons as a possible solution long term. APHIS is involved in the field tests and the clearance of genetically engineered cotton. We have very close contacts with industry in these efforts.

Senator COCHRAN. Thank you very much.

Senator Kerrey.

HACCP IMPLEMENTATION

Senator KERREY. Mr. Chairman, my principal line of interest is with Mr. Taylor's proposal for the FSIS. And I just want to take a few minutes with Mr. Dunn and others, Mr. Taylor, but to go on record as saying I think this implementation period for HACCP is a very, very important period.

And it will be a very difficult transition from an old system where the inspection was oriented toward making a list of things that were wrong with a plant to the new system of trying to apply specific points of best available science to ensure that the product going out of the plant is safe for consumers.

It is a radically different approach, a much better approach, but it will be vitally important for us to make sure that we provide you all with the resources to get the job done, otherwise consumers are going to, I think, object.

And if they object, we are going to pay a big price for it. I do not mean a political price for it; I mean, if consumers decide that they do not think our product is safe, they are just not going to buy it.

So we cannot do anything that gives either the perception or, in fact, the impression that we are going to decrease food safety. It has got to be quite the opposite. Consumers have to have increased confidence, and they should have, given what HACCP can do.

Second, it has to satisfy the manufacturing plants, the packing plants. And third, it has to satisfy those producers out there that are both growing and feeding livestock and other animals for the consumers.

So it is my judgment that we have to make sure that we provide you with the resources and then make sure you do the job.

The test for me is if you can come back before this committee a year from now and from the left to the right people are praising you, because we have heard from consumers, we have heard from packing plants, we have heard from cattle people, in my case, saying this thing is working great, those are the customers for me.

You make it work for them, and you make us look good. You make us look good, and it is an easy hearing. [Laughter.]

So it seems to me that we have to redouble our efforts to make sure that we provide you the resources.

MANDATORY VERSUS DISCRETIONARY SPENDING

When the Secretary was up here Tuesday with his overall budget, I expressed concern then and will continue to express concern, that the mandatory side of our budget is continuing to erode our ability to provide discretionary authority, as well as appropriations to do this sort of thing.

We are about to approve a new farm bill that will increase mandatory spending by \$3 billion; \$59 billion is what the Secretary has in his budget. That is going to have to go to \$62 billion.

Well, there are only two places from which the extra \$3 billion can come. Either I have to get it from some other area of Government, I have to decrease the spending in some other area, or I have to increase the deficit.

And it is more likely that it is going to come from some other area of the Government.

So that \$3 billion increase in the short term is going to put real pressure on discretionary spending. And farm programs are the least of our worries. We have had much bigger and much more popular programs in Social Security, Medicare, those programs that tend to go to a very active, vociferous, and effective group of Americans.

So it is terribly important for us to just say up front that we have a lot of people depending upon this policy's success. I think it is the right policy. I praise everyone that has been involved—and, Mr. Taylor, you in particular—for the work that you have done.

STEAM VACUUMING PROCESS

I want to particularly point out that your approval of the steam vacuuming process, I think, is a good approval, and I appreciate your making that decision.

But we have a lot of work to do between now and a year from now to make sure that the ultimate consumers come back to us and say: "Congratulations, Kerrey. You just did a good thing."

So I look forward to working with you and asking you some additional questions about how you are going to train, what kind of equipment you are going to buy, what is your strategy for making it work.

And I hope you take the questions as constructive. I just want to make sure it is successful.

Mr. TAYLOR. Thank you.

NEW LICENSE FEES

Senator COCHRAN. Thank you, Senator.

Mr. Baker, I have a letter from the president of the Livestock Marketing Association urging that our committee oppose the proposal in the budget submission that suggests that fees be imposed from new licenses to cover all of the packer and stockyards regulatory activities. That is probably not a big surprise to anybody that they would oppose that. Is this something that is being requested for the first time, or is this like the AMS proposal, reflective of many consecutive years of requests that these fees be authorized. Do you know?

Mr. BAKER. It would mirror the AMS request.

CAPITALIZATION AND STARTUP COSTS

Senator COCHRAN. OK. There is also a request for an increase of \$3.5 million to cover capitalization and startup costs to implement the packer and stockyard license fee program.

Mr. BAKER. It would take us—

Senator COCHRAN. So we need to appropriate \$3.5 million to give you some money to start up a program that is not going to start anyhow. Is that what that is? That is what it struck me as.

Mr. BAKER. If we shift to the licensing fees and all, we would need that money for one quarter to get our program in place.

RED MEAT PACKING STUDY

Senator COCHRAN. OK. There is also a study, according to your testimony, of the red meat packing industry that was mandated in an earlier appropriations bill that you say is complete, but leaves unanswered many important questions.

And then I suppose funding increases are requested, then, for you to do these other studies.

One relates to investigating deceptive and fraudulent practices that affect the movement and price of meat animals and another sum of money for increased analysis of industry structure and performance to monitor the competitive implications of behavioral practices in the meat packing industry and to support legal actions that require complex economic and statistical analysis.

What is all that for? What does that mean?

Mr. BAKER. Mr. Chairman, we are dealing in a highly complex industry that is really changing at a fast pace. We are wanting to focus our efforts on the procurement side beginning with the large packers that are involved.

As you know, the Secretary has appointed a committee to review the concentration study and other concentration issues and to make policy recommendations. We feel like the recommendations from this committee will reinforce the need for this additional money to focus in those areas of analysis and investigations.

SUBMITTED QUESTIONS

Senator COCHRAN. I have a number of other questions. But as you all can tell, I have a bad cold, and I apologize for sounding so funny. I told the Secretary yesterday, when we had our hearing, that the President's budget had left me speechless. [Laughter.]

Not really. But it is a pleasure to work with all of you in these hearings and throughout the year to try to identify what our priorities are and what they ought to be and how to allocate the scarce funds that are available to us under our allocation to get the best results for America's consumers and taxpayers and farmers and others who are directly affected by this Department's budget.

It is a pretty awesome responsibility, really, when you think about it. We know that you are putting your best efforts forward, and we want you to know that we will work with you in a way to try to help solve all the problems that we confront. I appreciate your cooperation with our committee.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

MARKETING AND REGULATORY PROGRAMS

QUESTIONS SUBMITTED BY SENATOR COCHRAN

STAFFING AND EXPENSES

Question. To what extent, if any, are expenses of the Office of the Assistant Secretary for Marketing and Inspection Services, including those of staff, being charged to the agencies of USDA?

Answer. There are currently six employees working out of this office. Including myself five of these employees are funded from funds appropriated to my office and one is being funded by the Animal and Plant Health Inspection Service.

Question. Please provide the FTE's funded in the FY 96 appropriation for the Office of the Assistant Secretary for Marketing and Inspection Service and the current on-board staffing level (FTE equivalent) in this office.

Answer. There are five available staff years for this office. They are all currently filled and fully funded.

Question. What is your policy on detailing USDA or other federal agency personnel to the Office of the Assistant Secretary for Marketing and Inspection Services? Please provide a comprehensive list of all USDA or other federal agency detailees to your office the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer. There is no specific policy on detailing USDA or other federal agency personnel to this office. However, there are occasions when it is necessary to obtain expertise and guidance in specific areas of jurisdiction under this office. When this occurs, it is necessary to detail personnel to provide this specific expertise. I will provide the comprehensive list of all detailees to this office in the past year.
(The information follows:)

Employee	Detail Dates	Purpose of Detail	Employing Agency
David Shipman	4/05/95 - 8/18/95	Duties of Deputy Assistant Secretary MRP 1/	GIPSA
Jennifer Yezak	10/01/95 - Present	Duties of Confidential Assistant to Assistant Secretary 2/	APHIS

1/ Position was vacant during this time. SES-Career. Paid from MRP funds.

2/ Schedule C. Paid from APHIS funds

Question. Are employees of any agency under the jurisdiction of the Assistant Secretary for Marketing and Inspection Services currently detailed to other USDA or other federal agency offices? Please provide a comprehensive list of all employees detailed in the past year, the length of detail, and the purpose of the detail.

Answer. I will provide the comprehensive list of all employees detailed in the past year, the length of detail, and the purpose of the detail.

(The information follows:)

Employee	Length of Detail	Purpose of Detail
Marty Rookard	11/94 - 2/96	Duties of Confidential Assistant to Administrator of GIPSA
Joan Mondschein	5/94 - Present	Duties of Confidential Assistant to Administrator, FSIS
Patrick Collins	5/94 - Present	Acting Director, Legislative and Public Affairs, APHIS
Michael J. Caughlin	08/22/94 - Present	Agribusiness Advisor to Emerging Democracies Office, FAS
David Rose	6 months 04/01/95 - 09/30/95	AMS expertise to Financial Information System Vision and Strategy (FISVIS)
George Sakacs	12 months 10/01/94 - 09/30/95	AMS expertise to FISVIS
Pauline Cougot	6 months 04/01/95 - 09/30/95	AMS expertise to Modernization of Administrative Programs (MAPS) Office

Sheila Young	12 months 10/01/94 - 09/30/95	AMS expertise to the Foreign Agricultural Service
Tina Cole	4 months 03/06/95 - 07/05/95	AMS program support to the Cooperative State Research, Education and Extension Service
Carole Powell	10 months 12/05/94 - 09/30/95	AMS support to USDA Office of Civil Rights Enforcement
Robin Parker	6/1/95 - 11/3/95	Clerical/Admini strative Support
Pat Gomes	1/22/95 - 2/3/95 3/5/95 - 4/6/95	Consultant - eradicate Med Fly International Consultant
Leonelle A. Lund	10/11/95 - 12/14/95	Developmental Assignment
Tracey L. Paugh	4/15/95 - 6/14/96	Developmental Assignment
Sue Hawkins	- 4/12/96	USDA Benefits Review Project
Evie S. Nicols	- 8/30/96	PMI Rotational Assignment
Karen Murray	10/1/94 - Present	FISVIS Project
Leslie Nanney	9/6/95 - 6/3/96	MAPS Project
Anna West	2/12/95 - nte 1 year	Developmental Assignment
Karen Day	11/3/94 - 3/12/95	FISVIS Project
Adam Grow, Jr.	10/3/94 - 4/2/95	Program Support - Health Affairs Staff
Mike Panchura	10/1/94 - 3/96	FISVIS Project

FOOD SAFETY AND INSPECTION SERVICE
QUESTIONS SUBMITTED BY SENATOR COCHRAN

SALMONELLA ENTERITIDIS PILOT PROGRAM

Question. The conference report accompanying the fiscal year 1996 Agriculture Appropriations Act expressly stated that "The conference agreement does not include funding to continue the Salmonella enteritidis program." Has FSIS expended any funds on this program since enactment of this Act?

Answer. FSIS is in the process of terminating the Salmonella enteritidis (Se) program as directed by the Conference Agreement for the FY 1996 Agriculture Appropriations Act. We expect to complete this process by June 30, 1996 with expenditures of \$0.5 million.

Question. If so, why?

Answer. In following the direction of the conference agreement, FSIS began terminating the Se program soon after Conference Action through employee reassignments and termination of temporary appointments. In terminating any activity, there are unavoidable personnel costs, such as severance pay and providing required periods of notice to employees affected by termination of the activity. On November 20, 1995 the House Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies wrote to the Secretary advising that it would be appropriate to continue Federal assistance for a period of time in fiscal year 1996 to allow states to phase out Federal involvement in the Se program and make the transition to a state-industry program operable. Since receiving this additional guidance, FSIS has continued the administrative actions necessary to terminate the program in an orderly manner.

HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP)
INSPECTION

Question. Much of the recent debate surrounding meat and poultry inspection has been focused on the new Hazard Analysis and Critical Control Points (HACCP) Inspection system. This subcommittee expressed its support for shifting to a HACCP-based inspection system in its report accompanying the fiscal year 1996 Agriculture Appropriations Act. At that time, there had been much debate about the proposed HACCP regulations, and Secretary Glickman agreed to hold some meetings with industry and consumer groups to work out some of the differences that had arisen. This subcommittee directed the Secretary to provide a report on these meetings prior to the promulgation of the final rule in its report accompanying the fiscal year 1996 Agriculture Appropriations Act. What was the outcome of those meetings?

Answer. I will be happy to provide this information for the record. [The information follows:]

September 13, 1995

The first meeting, held September 13, 1995, provided an overview of the HACCP proposal and focused on FSIS oversight of a HACCP-based inspection program. The Agency explained that once HACCP is implemented, FSIS would review and revise existing inspection tasks to assure they apply to HACCP systems. These revised tasks would be incorporated into the Performance Based Inspection System (PBIS) and become regular assignments for FSIS inspectors. In this way, FSIS will verify that proper food safety preventative controls are being used and followed.

The issue of "layering" the new HACCP-based inspection system on top of the existing organoleptic system was also discussed, as was a clarification of the roles of inspectors under the new system.

September 14, 1995

On Day Two of the meetings, FSIS responded to the previous day's issue of "layering" by explaining that under HACCP, industry would be expected to assume full responsibility for production decisions and execution, while FSIS would monitor and enforce plants' compliance with standards and would verify process control. FSIS would also review and revise or eliminate current regulations to ensure compatibility with HACCP requirements, use performance standards to eliminate certain command-and-control requirements, relieve inspectors of tasks that should be performed by establishments to allow inspectors to perform HACCP tasks, eliminate layers of FSIS supervision, shorten decision making lines, and eliminate unnecessary and redundant regulations.

Discussions later in the day underlined a continuing concern over what constitutes an acceptable HACCP plan and what the cost of developing one would be.

September 15, 1995

Day Three of the public meetings was primarily dedicated to a discussion of the merits of Salmonella versus generic E. coli as an effective indicator organism in any mandatory microbial testing program implemented to measure process control in meat and poultry plants.

September 27, 1995

Day Four involved discussion of the Agency's proposed carcass cooling standards for red meat and poultry. General support was expressed for the need to chill carcasses as a means of minimizing the growth of harmful bacteria, but some concerns were raised over the need for any regulatory requirements for carcass cooling, particularly the specific time and temperature requirements proposed in the rule.

FSIS recognized the need to take a practical approach that acknowledges the diversity of production practices affected by carcass cooling requirements and is

considering more flexible alternatives to the time and temperature requirements it originally proposed.

September 28, 1995

Day Five focused on the proposed rule's impact on small businesses and religious practices, such as kosher slaughter. FSIS repeated its commitment to mandatory HACCP, but conveyed its sensitivity to the cost impact on plant owners. Alternatives to carcass cooling requirements, antimicrobial treatments, and microbial and testing standards that could minimize the economic impact of the proposed rule were discussed. The Agency also stated its willingness to consider adjustments to the rule's proposed implementation schedule in order to ensure that small businesses under Federal regulation and those under State regulation are treated equally. The Agency plans to develop implementation aids, such as publications, training modules, and generic HACCP plans that could help reduce the uncertainty small plants have expressed about a mandatory HACCP program.

September 29, 1995

The final day of meetings addressed specific product considerations involving international trade. Some concerns were raised about whether the proposed antimicrobial treatments for meat and poultry carcasses would conflict with import requirements of countries to which the U.S. exports.

The Agency responded by stating that for exported product, FSIS is considering alternative approaches for achieving the same objective sought from antimicrobial treatments. For imports, the FSIS thinking is to require countries importing meat and poultry products to the U.S. to establish objective, science-based performance standards, and to ensure that systems of control equivalent to those used in the U.S. are in place to comply with the standards.

Question. Was a report written? When can this subcommittee expect to receive this report?

Answer. We are in the process of preparing a report that we expect to provide to the Subcommittee this spring.

Question. When do you anticipate a final HACCP regulation to be published?

Answer. We anticipate publication of a final HACCP regulation this spring.

Question. When will it become effective?

Answer. It will become effective in several phases after publication with emphasis on the largest plants first.

Question. How does FSIS plan to make the transition from the current system to the new system?

Answer. The move to HACCP-based process control and performance standards will require the industry to change how it does its job, but it also

embodies a fundamental shift in philosophy for FSIS. To make our new strategy work, FSIS must change its existing regulations, its organizational structure, and its approach to inspection. We have taken a number of concrete steps to bring about these fundamental changes.

First is our regulatory reform effort. On December 29, 1995, we published a notice in the Federal Register describing our regulatory reform strategy. We also published a final rule streamlining our prior approval system for labels and a proposal to cooperate more closely with the Food and Drug Administration on ingredient approvals and to eliminate redundant FSIS ingredient reviews and rulemaking. We are preparing proposals to eliminate the prior approval system for facility blueprints, equipment, and most partial quality control (PQC) plans and to add a performance standard alternative to the current command and control requirements of the regulations governing cooked meat and poultry products. The December notice also invited comment on a long list of FSIS regulations that may need revision to be consistent with HACCP. FSIS will be overhauling its existing regulations to be consistent with HACCP so that HACCP is not simply layered on top of outdated rules.

Regulatory reform is only one part of our strategy to prepare FSIS for the future. We are also planning a sweeping reorganization to prepare the Agency to implement a modernized system of inspection. FSIS is currently organized around managing an in-plant command-and-control inspection system. We cannot operate under a new food safety paradigm with an outdated organizational structure. We must align our structure with our HACCP-based, farm-to-table food safety strategy.

During fiscal year 1995, FSIS conducted a top-to-bottom review of the Agency's regulatory roles, resource allocation, and organizational structure, and based on the work of the Top-to-Bottom review teams, FSIS has developed a far reaching plan. The reorganization plans are being completed and will require review and approval through USDA before implementation can begin. We expect the approval process to take several months. Implementation will be phased in and is expected to take six months at headquarters and two years in the field.

The objective of the proposed reorganization is to consolidate and further streamline the headquarters and field management structures so they will work more cohesively and efficiently. In addition, FSIS has been streamlining non-inplant staff since 1995, and the new structure should accommodate the Agency's need to function with fewer staff. With these changes, FSIS would be able to increase the proportion of resources that are deployed to the Agency's frontline workforce--food inspectors, in-plant veterinarians, import inspectors, laboratory personnel, compliance officers, and first-level supervisors.

At headquarters, the number of organizational units reporting to the FSIS Administrator would be reduced from 13 to 7. The major new offices proposed are: the Office of Public Health and Science; the Office of Field Operations; the Office of Policy, Program Development and Evaluation; and the Office of Management. In addition, three small staffs would exist within the Administrator's office: Executive Secretariat, Food Safety Education and Communications Staff, and Legislative Liaison Staff. In addition to reducing the number of offices reporting to the Administrator, the proposal would eliminate

the associate administrator level of management and reduce the number of senior management positions.

The proposed new Office of Public Health and Science would combine some of the activities currently conducted by the Science and Technology Program with the activities currently conducted by the Epidemiology and Emergency Response Program. This office would provide new focus, leadership, and scientific expertise in these areas.

The proposed new Office of Policy, Program Development, and Evaluation would centralize the management of all policy, rulemaking, and program development activities to better lead and evaluate program changes. This new focus will be critical as we work to transform our program in coming years.

In addition to making important changes in the headquarters structure and focus, our proposed reorganization would also unify and streamline the management structure in the field. We currently have four separate field structures--Inspection Operations, Compliance, International Programs, and Egg Products--that are based in 46 field management offices. We propose to establish a single, unified field structure that would carry out all domestic and international meat, poultry, and egg product inspection and compliance activities through 18 district offices and a centralized technical services center. We would collapse the five regional offices and 26 area offices into 18 districts, thus eliminating one of the three supervisory/management layers in the current Inspection Operations structure. We believe the proposed district office structure would make supervisory spans of control more manageable and better balance the workload.

Following implementation of the district structure, the number of circuits could be reduced slightly based on appropriate workload changes and eliminating circuit and area overlap. We envision circuit supervisors playing an even more critical role in the future as frontline supervisors overseeing HACCP-based, in-plant inspection as well as an array of other activities inside and outside the plant.

The FSIS Field Automation and Information Management (FAIM) program is an essential companion to the field office consolidation because it will provide automation equipment to inplant and other field personnel. FAIM will enable FSIS to communicate large volumes of complex information--such as laboratory test results and current technical and managerial information--rapidly to its widely dispersed inspection personnel. Fiscal year 1995 was the culmination of three years of groundwork for the FAIM initiative. FSIS completed the first implementation phase in the second quarter of FY 1996, which is to provide automation to the field supervisory structure. We are now beginning a six month period of providing automation to inplant inspection personnel from four areas--Greenbelt, Maryland; Jackson, Mississippi; Springdale, Arkansas; and Salem, Oregon. By the end of FY 1996, FAIM will extend to all of International Programs, all field circuit supervisors in Inspection Operations and the Egg Products Division, and five areas of Inspection Operations.

The consolidated field technical services center, which would be created along with the 18 district offices, would, among other things, provide technical expertise and guidance to inspection personnel on the interpretation, enforcement, and application of domestic and import regulations, policies, and systems. With this center, answers provided to our employees would be more immediate and more consistent, a change that will benefit our program and industry alike.

We are enthusiastic about completing this plan, because we intend for it to prepare FSIS for success in the future. It will significantly streamline management and support functions both in headquarters and the field. It will align our organizational structure with HACCP and a farm-to-table perspective. It will ensure that FSIS is devoting as many of its resources as possible to frontline food safety and consumer protection activities. And it will strengthen our focus on public health priorities and on the need to carefully plan, implement, and evaluate program changes.

All told, we expect through this reorganization plan to show a reduction of non-frontline staffing of 20 percent by 1999, accelerating a decline in such staffing that began in 1993 and enabling FSIS to maximize application of its resources to frontline activities.

Finally, building on our HACCP rules, our regulatory reforms, and our new organizational structure, we plan to begin soon a public process on a new major initiative. We believe it is time to pilot test new approaches to inspection that would, within our current statutory mandate and still meeting all the consumer protection objectives of the current system, ensure that FSIS is making the best possible use of its resources to improve food safety. Under the current system, a large percentage of our inspection resources are devoted to tasks that do not necessarily provide us with the greatest possible return in terms of public health protection. We must redefine the entire inspection process, including post-mortem inspection, in a manner that better protects the public and more effectively uses our inspection resources not only within meat and poultry plants, but in cooperation with State and other Federal agencies, at other points where hazards arise, such as during transportation, storage, and at retail.

We believe that carcass-by-carcass inspection accomplishes a number of important consumer protection objectives, and we intend to continue to fully meet that statutory obligation. However, we recognize that there may be better ways--both from an effectiveness and efficiency standpoint--for FSIS to meet these important consumer objectives. With HACCP in place as a framework for addressing safety issues, and given the reality that we have a finite amount of resources, we can make better use of our resources in carrying out our inspection responsibilities.

We also believe there may be tasks currently performed in plants that could be performed more efficiently outside the plant or through a combination of inplant and marketplace activities. Examples include ensuring compliance with labeling requirements and standards for added substances, such as water in products.

By performing inspection tasks more efficiently, we will have the resources to handle new tasks along the farm-to-table chain that are critical to food safety. We plan to look at the farm-to-table continuum and identify, through risk assessment, points along the continuum where there is the greatest risk to the public health. We will consider those points as potential sources for inspection and other efforts and determine more specifically what roles our employees should play during marketing, transportation, and retail.

Question. Will FSIS work with the industry and consumer groups to put together a plan to effect this transition which is agreed on and understood by all parties?

Answer. As I've mentioned earlier, FSIS has already developed a close working relationship with industry and consumer groups during its HACCP rulemaking process. Public hearings have enhanced the interchange between the Agency and major constituent groups regarding the proposed rule's provisions. The Agency has taken into account the comments it received during these hearings, and during the comment period, as we developed the draft final rule. In fact, some significant changes in the proposed rule dealing with the implementation process and the role of microbiological testing are the result of the input gathered at these hearings. Further, the Agency has held a series of technical conferences to address science and technology issues related to major elements of the proposal, such as the role of microbiological criteria in food safety, and other technical aspects of the rule.

FSIS will continue to work closely with industry and consumer groups during the transition to a HACCP-based inspection program, and will do so through an open, participatory public process. FSIS plans to convene an implementation conference in Washington, D.C., about 60 days after publication of the Pathogen Reduction/HACCP final rule. Similar sessions will follow in various cities around the country. The purpose of the implementation conferences is to continue, and build upon, the dialogue among interested parties that occurred during the six days of public meetings FSIS conducted in September 1995 on the proposed rule. FSIS anticipates that discussion at the implementation conferences will focus on the status of FSIS efforts to develop generic model HACCP plans and conduct small establishment HACCP demonstration projects; the draft guidance materials to be made available to establishments; the revised HACCP implementation schedule and certain technical aspects of the regulations being promulgated in the final rule; training for FSIS and industry employees; alternative dispute resolution, due process, and enforcement issues; and other implementation issues identified by the public.

The Agency plans to also pursue notice and comment rulemaking for the alternative inspection models it will develop and pilot test in conjunction with implementation of the Pathogen Reduction/HACCP rule.

Question. Are you doing this now?

Answer. Not at this time; however, we plan to begin holding implementation conferences around the country within 60 days after publication of the final rule.

Question. How will a fully-implemented HACCP system affect your current staffing levels?

Answer. FSIS is committed to transforming the inspection program within current staffing levels. We have made a conscious decision to improve our program by modernizing the manner in which we deploy our current resources, so that maximum support is given to frontline activities, including inspection. Through implementation of the Agency's proposed reorganization, FSIS will

accomplish this goal. The inplant setting will continue to be critical to ensuring food safety. FSIS will look to the in-plant work force to verify industry HACCP plans. This will involve a certain amount of modification in existing inspector roles; however, staffing requirements to carry out the new duties will approximate current levels.

The fiscal year 1997 budget assumes that an estimated 800 slaughter inspectors will be redeployed to perform more complex HACCP monitoring activities, and 200 processing inspection staff years will be redeployed to carry out HACCP-related prevention activities both within and beyond the inplant setting. This type of retraining and redeployment will continue in fiscal year 1998 as well. Pilot projects are planned to demonstrate alternative post-mortem inspection procedures and a reallocation of resources to perform tasks that are focused on health and safety issues.

UPGRADE INSPECTOR SALARIES

Question. You have requested an increase of \$2.3 million to upgrade inspector salaries for "performing more complex science-based food safety activity." Is this increase part of any negotiations or commitments with the National Joint Council?

Answer. The 1997 budget proposal to upgrade the salaries of 800 slaughter inspector positions and 200 processing inspector positions is not part of negotiations or commitments with the National Joint Council.

Question. Why should meat and poultry inspectors receive a pay raise to conduct their jobs in a manner consistent with the purposes for which they were hired?

Answer. The implementation of the HACCP regulation is expected to significantly increase the skill requirements of meat and poultry inspectors, such that they will be required to perform food safety activities that were not required when they were hired. New activities may include health and safety tasks, such as verifying that plant employees properly perform industry tasks associated with producing safe, wholesome, and unadulterated product. As inspectors assume responsibility for more complex science-based inspection tasks, the Agency expects to increase their compensation to retain their expertise and ensure the safety of inspected product. The proposed increase would provide the funding necessary for the estimated increase in compensation.

HACCP TRAINING

Question. You have requested \$3.5 million for FY 97 to train the inspection workforce on HACCP. That comes to about \$450 per inspector. One of the criticisms we've heard is that the new role of an inspector in an industry that utilizes HACCP food production systems has not yet been defined. How do you see that role being defined?

Answer. Implementation of HACCP will significantly change the roles and regulatory responsibilities of inspection personnel. Inspection roles and responsibilities will shift from detecting facility and production problems to

evaluating and verifying that plants are producing safe meat and poultry products that meet performance standards established in the Pathogen Reduction/HACCP regulation. Inspection evaluation activities would include assessments of whether or not plants comply with the specific elements of the regulation. Inspection verification activities would include an assessment of records to verify that an establishment is complying with its written HACCP plan, as well as in-plant visual observations, microbial testing, and other inspectional tasks to ensure that HACCP is being properly implemented and performance standards are being met.

Formal enforcement actions, including retention of products or suspension of operations, would be instituted when inspection personnel identify and document occurrences of direct product contamination, unsanitary conditions where the product may have become adulterated or contaminated or where it may have been rendered injurious to health.

Question. How will that impact the training you intend to provide inspectors?

Answer. The movement to a HACCP work environment would represent the most significant change to the regulatory process in the history of the inspection program. This would require that the field work force be trained to understand and perform new work tasks and to adapt to the changing regulatory focus. The initial training would focus on three aspects: (1) to equip employees to handle the regulatory tasks associated with possible HACCP near-term initiatives; (2) to equip employees to understand and appreciate the cultural changes that will take place in a HACCP work environment; and (3) to equip frontline supervisors to lead the cultural change. Subsequent training would be provided on a sequential basis to correspond with the HACCP phase-in schedule. In this way, inspectors would be able to directly apply "just learned" knowledge and procedures within days of receiving training. Training would be delivered by Agency personnel at the local level, using standardized materials developed expressly for that purpose.

Question. Will that new role be developed with input from the regulated industry?

Answer. FSIS plans to work with industry to test models for alternative post-mortem inspection procedures in slaughter plants. This will require industry participation by way of plant volunteers to conduct the models and to work with FSIS on follow-up modifications after the trials are completed. In a similar vein, FSIS plans to work with the States and with trade associations to develop and implement demonstration projects to reveal how HACCP can work in small meat slaughter operations.

After publication of the final rule, FSIS plans to convene a three-day implementation conference to continue, and build upon, the dialogue among interested parties that occurred during the six days of public meetings FSIS conducted in September 1995 on the proposed HACCP rule. FSIS anticipates that, among other things, discussion topics will include methods to achieve the goal of consistent training for FSIS and industry employees.

FSIS is already cooperating with the private sector to ensure that a wide variety of training options are available to industry and FSIS employees. For

instance, FSIS is encouraging national and local trade associations, State and local officials, the State Agricultural Extension Services, and local colleges and universities to help establishments incorporate HACCP into their operations.

Question. When do you anticipate that these discussions will begin?

Answer. FSIS plans to begin its HACCP implementation conferences approximately 60 days after publication of the final rule.

Question. How many inspectors do you anticipate training in FY 97?

Answer. In FY 97 we plan to train 8,200 employees during the first round of training and begin a second round of training for 4,500 of the employees trained during the first round.

Question. How many of the inspectors that will be trained in FY 97 are assigned to plants that will be required to comply with the new HACCP regulations in FY 97?

Answer. The entire field workforce will be trained on how to carry out the regulatory oversight duties for these requirements. This training will be scheduled to coincide with the compliance dates of the rule. Because of the significance of the change in the Agency's regulatory philosophy, every field employee will also be trained on the organizational culture changes resulting from the new regulatory focus, with emphasis on how it will effect an employee's actions and behavior.

The process of equipping the workforce to carry out the redefined regulatory tasks will be handled by use of the "Just-in-Time" approach to training. Under this approach, training is delivered just before an employee has to apply a new or different skill and knowledge.

The first round of training would occur during the fall of 1996 and the second round of training would occur during the fall of 1997.

Question. Who will conduct the training?

Answer. FSIS will use its own employees under the "Train-the-Facilitator" approach for the delivery standardized materials.

HACCP IMPLEMENTATION COSTS

Question. Mr. Taylor, you testified today that the HACCP inspection system was being implemented at no additional cost, it is merely a redeployment of the agency's existing resources. But, the budget justification includes numerous references to funding increases necessary to implement HACCP inspection. Please explain.

Answer. I have said that we plan to implement HACCP by redeploying our current resources so that maximum support is given to frontline activities, including inspection. Modernization activities, such as continued HACCP training, microbiological sampling, and laboratory renovation, would be supported with modest increases in our fiscal year 1997 request, and are needed in order for FSIS to implement HACCP in a timely manner and according to the four year schedule included in our proposal. These increases, however, would be

offset in part by savings realized through the Agency's continued streamlining of non-inplant staff positions in fiscal year 1997, as well as additional cost reductions in travel and other operating expenses.

MEAT AND POULTRY INSPECTION

Question. Does your assessment for the need for additional inspection salaries for fiscal year 1996 take into consideration the announcements by many of the major poultry processors that they are reducing production, and that due to high corn prices and low beef prices, many cattle producers are keeping their animals rather than sending them to stockyards for slaughter?

Answer. The increase of \$3.2 million in the fiscal year 1996 supplemental appropriation request for 100 other-than-permanent staff years is based on current staffing needs to maintain adequate inspection coverage through the end of fiscal year 1996. Current staffing needs are determined through ongoing contact by the Agency with inspected establishments about estimated levels of industry production.

Under the current inspection system, the number of inspection assignments are driven by industry production demand. In fiscal year 1995, the number of assignments increased due to an increase in production demand, but the number of permanent full-time inspectors decreased. Although FSIS is in the process of hiring permanent full-time inspectors, an increase in the use of other-than-permanent employees is needed to fill the current gaps in inspection coverage.

Question. Do you consult with producer groups in making such an estimate?

Answer. The Agency has ongoing contact with producer groups and inspected establishments as it estimates the level of inspection coverage needed for the future to keep pace with industry production demand.

Question. Can you provide assurance to this subcommittee that there will be no disruption to slaughter and processing operations this year?

Answer. Under the most optimal conditions there will be sporadic staffing shortages due to illness and other unforeseen circumstances. However, we will continue to place a high priority on providing inspection coverage in slaughter establishments to avoid disruptions in plant operations. Additionally, we will continue to provide coverage to processing establishments to the greatest possible extent to ensure that there is no further erosion in the delivery of inspection service.

Question. How do you plan to manage your FY 97 appropriation in such a way that plants remain fully staffed with inspectors?

Answer. We plan to use the same level of in-plant staffing proposed in the 1996 Supplemental Appropriation Request which would include 100 additional other-than-permanent staff years. In addition, pilot testing of alternative inspection methods is expected to result in inspection improvement which would increase efficiency and enable the Agency to maximize use of inspection resources. Together, these measures would enable FSIS to provide more staffing to reduce the strain on current inspection resources.

Question. The fiscal year 1997 budget includes \$325.3 million for slaughter inspection activities, an increase of \$10.8 million from FY 96. Included in this amount is \$7.8 million for pay increase. Funding of \$135.8 million is included for processing inspection, an increase of \$4.6 million. Included in this amount is \$3.3 million for pay increases. Are the increases for HACCP pay raises included in this amount?

Answer. The requested increase of \$11.1 million for pay increases in slaughter and processing inspection does not include the proposed upgrade of inspector salaries, which would cover 800 slaughter inspector positions and 200 processing inspector positions. The proposed upgrade in inspector salaries is a separate budget initiative.

Question. Including pay raises, why are these costs increasing, when total inspector positions are expected to decrease by over 70 positions?

Answer. We are proposing to decrease 71 non-inplant positions in slaughter and processing inspection. We are not proposing any reductions in inspector positions for FY 1997. The \$11.1 million increase for pay raises would enable FSIS to maintain the current levels of inspection.

Question. It is my understanding that the hiring of other-than-permanent, full-time inspectors has many benefits. It allows you to afford three employees for the cost of two permanent, full-time employees, and it also gives you maximum flexibility in inspection workforce assignments. What is the agency's view of other-than-permanent, full-time inspectors, and do you intend to hire any of these individuals in FY 97?

Answer. We agree that other-than-permanent (OTP) employees provide FSIS with flexibility in inspection workforce assignments. OTP employees are an essential inspection resource for filling gaps when permanent full-time employees are on leave. Trained to perform basic inspection tasks, OTP employees enable the Agency to maximize its inspection resources by freeing up PFT inspectors to conduct complicated inspection activities that are targeted at higher risk activities. FSIS has utilized OTP employees to perform inspection duties for many years and plans to continue to do so in FY 1997.

Question. Please provide an estimate of the net change in assignments for inspector positions for slaughter and processing inspections expected in FY 97.

Answer. Under the current inspection system in FY 97, the number of inspection assignments are expected to increase by 100 due to industry production demand.

PUBLIC HEALTH EDUCATION

Question. Many food borne illness victims, physicians and public health professionals have criticized the lack of public health education programs available to prevent food borne illness. I know FSIS provides a toll-free consumer hotline, but could you tell me what you are planning for FY 97 in the

area of public health education? Do you have plans to work together with any health, industry, or consumer organizations in this regard?

Answer. The Food Safety and Inspection Service plans to play a major role in FY 97 as coordinator of a new food safety education initiative by bringing together the various parties who have an interest in providing information to consumers.

FSIS expects that by bringing together public health and consumer organizations, physicians, educators, and the food industry, a more concentrated effort can be undertaken, thereby increasing the impact of food safety messages to consumers.

Toward that end, FSIS will be prioritizing the most serious food safety public health issues facing consumers. Once that is developed, FSIS will bring together the various organizations to develop a campaign theme that can be used by all parties.

FSIS will be a resource to these organizations as they develop education materials. FSIS will:

- Provide results of behavioral studies on what consumers know about food safety;
- Provide information on how to effectively reach consumers;
- Review materials to insure that all information prepared is consistent with FSIS' food handling recommendations;
- Provide oversight to ensure that information developed reaches a variety of target audiences.

In FY 1996, FSIS has coordinated the campaign of a pilot education program in New York State. FSIS has brought together various state and local government organizations, public health and education organizations, and the food industry to mount a campaign to reduce illness from *E. coli* 0157:H7. This pilot program demonstrated that when organizations get together with one simple, consistent message, the impact is far greater than each group going its own way. FSIS believes this process can be successful on a national level as well.

FIELD AUTOMATION INFORMATION MANAGEMENT

Question. The President's original FY 96 budget, along with the agency's revised and current FY 96 budget estimates, contain \$8.4 million for the Field Automation and Information Management initiative. What are the goals of this initiative?

Answer. The goal of the Field Automation and Information Management (FAIM) project is to analyze the inspection and business processes and practices of the Agency, and systematically apply automation to those processes to improve Agency productivity, inspection effectiveness, and service to industry and the

public. FAIM also provides the infrastructure required to support new inspection programs, such as HACCP, and streamlining of the field structure.

The expansion of automated information systems will provide rapid communication among all levels of the Agency and upgrade existing systems to further advance the Agency towards a goal of a single integrated information system covering all aspects of the Agency's operations.

Question. What contribution would this initiative make to protecting consumers from diseases such as BSE, or its related human disease, Creutzfeldt-Jakob disease?

Answer. In general, FAIM will help improve Agency communication channels, with one result being a faster, more coordinated response to emerging public health threats, such as Creutzfeldt-Jakob disease (CJD). In instances such as these, FAIM would enable the Agency in a single communication to direct all slaughter inspectors to look for particular symptoms and take samples for laboratory analyses, all processing inspectors to ensure that processed products did not include certain beef, and all import inspectors to intensify inspection of product from a specific country. In less than one day, over 7,000 inspectors inspecting product in over 6,000 establishments across the country would have been provided the technical background and instructions for handling BSE, or similar health threats.

Question. Why did you hold this account harmless in adjusting funding levels in response to your FY 96 appropriation? Are computers more important than inspectors?

Answer. The issue is not a question of choosing computers over inspectors. It is a decision to move forward to a program recommended by public health experts and supported by industry and consumers, a program designed to significantly enhance the safety of our meat and poultry supply. To plug gaps in the existing inspection system by deferring FAIM implementation will not improve inspection; it will further delay improvement.

FAIM is an essential component of the Agency's modernization effort. The field-based computers will be used on a daily basis by inspectors and supervisors to communicate within and outside the Agency; access technical references and inspection regulations, with the full benefit of computer-assisted searching techniques; obtain laboratory results on meat and poultry samples; schedule and document inspection activities; improve inspection skills through interactive computer-based training; and perform typical office automation activities such as word processing. The FSIS field workforce must be equipped with these basic automation and communication tools if they are to implement a science-based modern inspection program. The FAIM implementation plan has been designed to maximize support for the Agency's field office restructuring included in the reorganization plan and to support HACCP implementation. Although fiscal year 1997 is the second year in the five-year FAIM implementation plan, over 55 percent of large HACCP plants will be covered by the end of the fiscal year, plus all inspectors located in seven of the 18 proposed districts will be fully automated. This will increase to 75 percent of large HACCP plants in early fiscal year 1998.

Question. What do you intend to do with the \$8.5 million requested for FY 97?

Answer. The FSIS request of \$8.5 million in FAIM funding for fiscal year 1997 represents an increase of \$100,000 for inflation over the fiscal year 1996 funding level. It would provide for the second year of a five-year implementation strategy. The major components of the implementation include:

1. The purchase of approximately 800 notebook/desktop computers, including printers and software. The blueprint for allocating computers is designed to maximize support for HACCP inspection and the proposed streamlining of the field structure.
2. The training of approximately 1,000 field inspection personnel, including delivery of training and associated travel and per diem expenses.
3. Modernization of FSIS' hardware and software infrastructure to support the increased number of users and increased number of applications.
4. Applications design and development to modernize existing applications and to implement reengineered business functions.
5. Hardware maintenance for over 1,000 existing computers and 800 new computers.
6. Technical support on software, hardware and telecommunications for over 2,000 field inspection personnel.
7. FTS2000 telecommunications to support remote communications, including electronic mail, for a geographically dispersed workforce.

Question. How does the FAIM initiative fit into the department-wide information systems technology architecture, which was directed by this subcommittee in its report accompanying the FY 96 Agriculture Appropriations Act?

Answer. The Department is continuing its efforts to define its telecommunications, information, and decision-making architectures. FSIS has representatives on the various groups working on these issues and will ensure that FAIM is integrated into Department-wide information systems.

SMALL PROCESSORS

Question. I notice that the budget includes a request for \$1 million "to adapt food safety technology for use by small businesses." How do you intend to use these funds?

Answer. The Agency expects to use the requested increase for feasibility studies of equipment technology. FSIS proposes to work collaboratively with small businesses and equipment manufacturers through demonstration projects in the in-plant setting to develop cost-effective alternative process controls that will

accomplish the same objectives as technologies designed for large plant operations. This will ensure that small businesses are not excluded from access to technology developments, such as steam vacuum equipment which is presently designed for use in a large volume establishment.

FRESH VS. FROZEN POULTRY

Question. Mr. Taylor, as you know, the Fiscal Year 1996 Agriculture Appropriations Act included language which restricted the Food Safety and Inspection Service from implementing the regulation on the labeling of fresh and frozen poultry. Have you complied with this statutory language?

Answer. Yes, sir, we have. FSIS has committed no resources during fiscal year 1996 to the implementation of, or anything associated with, the regulation on labeling of fresh and frozen poultry.

Question. Has the FSIS provided any guidance or assistance to the California Department of Agriculture or other state regulatory agency on how they can enforce this regulation, notwithstanding the inability of FSIS to enforce it?

Answer. FSIS has not advised California or any other state on how to enforce the "fresh" labeling rule.

Question. If the national poultry industry and the California poultry industry were to reach an agreement on fresh and frozen labeling, would FSIS consider publishing a new rule?

Answer. FSIS would carefully consider and review any petition from the industry regarding this or any other regulatory issue. The issue for FSIS under the Poultry Products Inspection Act is whether poultry labels are truthful and not misleading.

Question. Are you spending any money or transferring money to conduct additional research related to the fresh and frozen rule?

Answer. The Agency has not spent any money in fiscal year 1996 on additional research related to the rule, nor have we transferred any money to any other government agency or private contractor for this purpose.

HIGH TEMPERATURE VACUUM

Question. I saw yesterday's press release announcing the Department's approval of a new high temperature vacuum technology for the removal of contamination from beef carcasses. Why did it take FSIS two years to approve use of this technology?

Answer. As you know, after the February 1993 outbreak of E. coli O157:H7 in several Western States, FSIS decided to more strictly enforce its contamination removal policy for beef carcasses. This precluded the use of carcass washes to remove observable feces and ingesta from beef. The trim-only policy was based on the judgment that trimming was more effective for removing fecal contamination than alternative approaches. At the time, there were no

scientific data available to the Agency comparing the efficacy of trimming and alternative approaches.

Since 1993, however, numerous other approaches to removing contamination have been devised and studied to assess their potential as effective alternatives or supplements to carcass trimming to achieve the zero tolerance standard. Among these is a vacuum system which incorporates hot water and steam above 180 degrees Fahrenheit and has been proven in industry and USDA studies to be highly effective in removing physical contaminants and associated bacteria, including pathogens, from beef carcasses. Laboratory studies by USDA's Agricultural Research Service (ARS) and industry trials conducted in 40 plants confirmed that steam vacuumed carcasses carried approximately 90 percent less bacteria than trimmed carcasses in the areas tested.

Given these results, the regulated industry petitioned FSIS on July 21, 1995 to consider a change in its zero tolerance policy to allow proven alternatives to trimming, such as the steam vacuum system, for use in beef carcass decontamination. In response to that petition, FSIS held a conference on October 23 and 24, 1995 to review data on alternatives to trimming for achieving the Agency's zero tolerance standard. The September 26, 1995 Federal Register notice announcing the conference included a complete review of scientific and technical data comparing the efficacy of available methods to achieve the zero tolerance standard. This review addressed a broad array of issues to be considered in any proposed change in the trim-only policy, including the condition of animals arriving at slaughter; sources of bacterial contamination during slaughter; the rate of attachment, growth, and multiplication of bacteria on carcasses; and methods to decrease carcass contamination.

Based on this data review, comments and presentations made at the October 23-24 conference, and USDA and industry experience with interventions to remove visible contamination and accompanying microbial contamination of meat, the Agency decided to permit the use of steam vacuuming as an alternative to the trim only policy for fecal and ingesta contamination of less than one inch in its largest dimension. A notice will soon be published in the Federal Register which will announce the Agency's policy change and list other decontamination systems, such as organic acid treatment, chlorinated water, trisodium phosphate, and other microbial agents, that may be used without prior Agency approval in conjunction with, but not as a substitute for, knife trimming or steam vacuuming.

Question. Do you anticipate approving the use of this technology on other animals?

Answer. To date, the Agency has received no official requests to approve the use of this technology on other species. Approval of this technology for other species would require the Agency's careful review and analysis of data to determine that the technology meets food safety standards.

TRAVEL

Question. Mr. Taylor, I received a copy of the Secretary's response to Representatives Roberts and Gunderson's letter regarding the Food Safety and

Inspection Service. I have some additional questions regarding the information that was provided in the response.

The response includes some 85 pages which detail the travel of FSIS employees that was not related to inspection. Representatives Roberts and Gunderson asked if all of this travel was directly related to the agency's statutory obligation of inspecting meat and poultry. The Secretary's response was that all of it was. My question is, how is travel for sexual harassment training by 16 people, at a cost of over \$16,000, directly related to the agency's statutory obligation of inspecting meat and poultry?

Answer. There are many regulations with which the Agency must comply that cover all Federal employees. These regulations are in addition to the regulations governing a particular mission area and provide instruction on policies such as interpersonal behavior in the workplace, including sexual harassment. The employees who received sexual harassment training have increased the Agency's knowledge and enabled the Agency to provide instruction for employees to ensure that inappropriate interpersonal behavior does not interfere with FSIS' statutory obligation of inspecting meat and poultry.

Question. Also included in these 85 pages were 25 pages detailing travel for "labor management relations." Please explain exactly what was the purpose of this travel.

Answer. The Labor Management Relations (LMR) staff is required to travel to the field to meet requirements for processing of grievances and allegations of Unfair Labor Practice charges (ULPs), and for arbitration purposes. It is more cost effective for one of the LMR staff to travel to a location near the site where the ULP is alleged to have occurred than for the individual making the allegation to travel with the Local President and the Council President to Washington, D.C. The LMR staff also sends one representative to attend Council meetings twice a year in each of the eight Councils. Additionally, the LMR staff conducts training for field supervisors.

Local Presidents and Council Presidents must travel to observe new technology and pilot projects, and to handle grievances by providing representation for their members. Council Presidents also are required to travel to Washington, D.C. for six National Consultations each year, and to Relationship-by-Objectives meetings. The total number of meetings is determined through an agreement between FSIS and the National Joint Council. In addition, each region has a structure similar to the National Consultation which requires regional travel to meetings two to four times a year.

Question. My staff estimates that this travel amounts to between \$560,000 and \$923,000. Is this justified?

Answer. It is in the Agency's interest to communicate and interact on an ongoing basis with its widely distributed nationwide labor force. A significant amount of travel is required to enable both labor and management to interact on program and personnel issues; and due to FSIS's nationwide structure, more travel is required than for other agencies that may operate in an office setting in only a few locations. The fiscal year 1995 travel for labor management relations reported in the response to the December 13, 1995 letter from Congressmen

Roberts and Gunderson totalled \$565,441. While this is a significant amount, it is less than three percent of the Agency's total travel obligations for fiscal year 1995.

Question. Is this in addition to the \$68,000 cost of meetings with the National Joint Council?

Answer. No, the \$68,000 for National Consultations is included in total Labor Management Relations travel.

STAFFING AND EXPENSES

Question. To what extent, if any, are expenses of the Office of the Undersecretary for Food Safety, including those of staff, being charged to the Food Safety and Inspection Service or other USDA agencies?

Answer. No expenses for the Office of the Undersecretary for Food Safety are being charged to FSIS.

Question. Please provide the FTE's funded in the FY 96 appropriation for the Office of the Undersecretary for Food Safety and the current onboard staffing level (FTE equivalent) in this office.

Answer. Five FTE's are reflected in the FY 96 appropriation for the Office of the Undersecretary for Food Safety and the current onboard staffing level is four.

Question. What is your policy on detailing USDA or other federal agency personnel to the Office of the Under Secretary for Food Safety? Please provide a comprehensive list of all USDA or other federal agency detailees to your office in the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer. FSIS has not augmented the current staffing of the Office of the Under Secretary with additional Agency staff. There were no details to this office in the past year.

Question. Are employees of the Food Safety and Inspection Service currently detailed to other USDA or other federal agency offices? Please provide a comprehensive list of all FSIS employees detailed in the past year, the length of detail, and the purpose of the detail.

Answer. Yes, employees of the Food Safety and Inspection Service are currently detailed to other USDA agency offices. I will be happy to supply the information for the record. [The information follows:]

<u>Detailees</u>	<u>Length of Detail</u>	<u>Purpose</u>
Elizabeth Jones* Confidential Assistant	5/94- Present	Confidential Assistant for Agricultural Marketing Service, Office of Communications

Patrick Collins* Confidential Assistant	6/94- 4/96 ✓	Director of Legislative Affairs for Animal and Plant Health Inspection Service
Bill Holland Program Analyst	11/94-10/95	To provide analytical work on project "Year 2000", for the USDA, Office of Personnel
Jamshyd Rasekh Food Technologist	6/95-10/95	To provide expertise and knowledge on several projects in the Office of Agricultural Biotechnology, Cooperative State Research, Education, and Extension Service
Denise Barnes Secretary	11/95- Present	Clerical support to the Office of the Secretary
Angela Kirk Secretary	2/96- Present	Clerical support to Departmental Executive Services Division
Mostafa Eldakoky Food Technologist	3/96- Present	To provide food technology support for Foreign Agricultural Service
Latisse Mays* Staff Assistant	3/96- Present	To provide staff assistance to the Office of the Secretary
Tara Cauley* Staff Assistant	11/95-3/96	To provide staff assistance to the Office of the Secretary

*Schedule C employees

BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)

Question. In the past week, the press has given much attention to the outbreaks in Great Britain of BSE, commonly known as "mad cow disease." On Tuesday, Secretary Glickman testified to this committee that the United States was enhancing its inspection efforts to protect American consumers. Is it not true that the United States has not imported beef products from England since 1989?

Answer. Since 1983 no British slaughter plants have been certified to export beef to the United States. Currently, one meat processing plant is certified as eligible to export to the United States, but it has never done so.

Question. What exactly is FSIS doing to respond to this?

Answer. FSIS has increased its activities in assisting APHIS in their surveillance programs for BSE in the U.S. cattle population. FSIS is expanding its identification of cattle for sampling by APHIS for evidence of BSE. FSIS will target its sampling to include all cattle showing clinical signs of central nervous system disorders. Also, FSIS has expanded the distribution of education and training materials to both Federal and State inspection personnel to increase awareness of BSE and to assure that the increased surveillance activities are in place. Additional BSE educational materials will be incorporated at the FSIS National Correlation Center, FSIS Training Center and at all red meat training stations located across the United States. Informational packages have been sent to all Regional and Area Offices to inform field personnel about the developments in the United Kingdom and the need for heightened surveillance.

Question. Have there been documented cases of Creutzfeldt-Jakob disease in the United States?

Answer. In the past, health officials have monitored Creutzfeldt-Jakob (CJD) disease passively, by checking death certificates. The last Centers for Disease Control and Prevention (CDC) survey, checking deaths between 1979 and 1991, found 200 to 250 cases per year. On April 8, CDC officials announced a stepped-up surveillance for CJD at selected sites.

Question. How does the current inspection system protect consumers from diseases such as this?

Answer. FSIS has always had rules requiring that those animals showing clinical signs of a central nervous system (CNS) disease be condemned on antemortem and not be permitted into the slaughterhouse or to enter into the food chain. Over the past 5 years, approximately 200 head of cattle have been condemned for CNS conditions per year. Beyond determinations of basic CNS abnormalities, FSIS has not made additional diagnosis of the specificity or frequency of disorders associated with these condemnations.

Question. How would the HACCP inspection system protect consumers from diseases such as this?

Answer. A HACCP inspection system would allow FSIS to focus and intensify its resource allocation on specific public health issues. Prevention measures and surveillance are critical components of HACCP systems. Applying HACCP principles to the farm-to-table continuum stretches responsibility for food safety concerns to all control points. Proper animal identification and record keeping prior to animals reaching the slaughterhouse can enhance an overall HACCP program. HACCP will allow FSIS to have the flexibility to redeploy resources to the highest risk older animals coming into slaughter.

USER FEES

Question. The budget assumes the collection of user fees during FY 96 for anything beyond a primary shift. Under this proposal services required beyond a regular eight hour shift, or ten hours in cases where plants run ten hour shifts for

four days a week, would be counted as overtime and the slaughterhouse or processing plant would be required to reimburse the government for the full cost of inspections. This would apply to those plants that regularly run a second shift as well as to those that periodically run a few hours over an eight hour shift.

Under current law, the government provides inspection services at no charge to plants that operate a second shift on a regular basis. If the second shift goes over, or if a plant that normally operates a single shift goes over, they are charged overtime by the government to cover the costs of the inspectors. It is estimated that this fee would save approximately \$109.4 million in FY 97. Have you submitted legislation to the appropriate authorizing Committees of the Congress?

Answer. The proposed legislation that would authorize user fees is identical to the legislation proposed in the 1996 budget which was submitted to Congress on March 23, 1995. The legislation submitted in 1995 remains as the Administration's proposal through the end of the 104th Congress.

Question. How does this proposal differ from the one submitted last year?

Answer. The proposed legislation that would authorize user fees is identical to the legislation proposed in the 1996 budget.

Question. What is your estimate of the actual fee to be charged?

Answer. User fees would be based on the cost of inspection provided at plants beyond a primary approved shift. There are approximately 1,200 meat and poultry plants and 40 egg products plants that operate beyond a primary approved shift. These plants conduct slaughter, processing, or a combination of slaughter and processing operations. The Agency would engage in a regulatory rulemaking process to determine the basis for assessing a user fee. It is expected that user fees would be based on the direct and indirect cost of providing inspection at these plants by an estimated 1,900 inspector positions.

Question. The budget indicates that the "fees are estimated to have a negligible impact on prices. The additional cost should be less than one cent per pound of a product." Who prepared this estimate?

Answer. The cost of inspection per pound has been determined by dividing the estimated amount of product inspected into the portion of the appropriation that would cover Federal inspection. We have used the relationship between inspected product and appropriated funding to project the cost of inspection beyond an approved primary shift. I will be happy to provide the analysis for the record. [The information follows:]

FY 1997 ESTIMATE

<u>Federally Inspected Product</u>	<u>Millions of Pounds</u>	<u>Cost of Inspection (Millions)</u>	<u>Cost of Inspection (Cents/Lb.)</u>
Meat Slaughter	44,800		
Poultry Slaughter	42,300		
Egg Products	3,352		
Imports	<u>2,600</u>		
Subtotal	93,052	\$532.3	0.57
Grants to States	--	<u>41.7</u>	
Total		<u>\$574.0</u>	

Question. Was the industry surveyed as to what action they would anticipate taking if these user fees were enacted?

Answer. Although no formal surveys have been taken, FSIS has had numerous discussions with industry groups over the past 10 years about various user fee proposals.

RESEARCH ACTIVITIES

Question. It is my understanding that the Agricultural Research Service currently conducts about \$50.5 million in food safety research, which is coordinated with the Food Safety and Inspection Service. Is any research conducted and/or funded directly by the Food Safety and Inspection Service? If so, please provide a detailed explanation of the research and the funding level. If so, why? It is my understanding that the Agricultural Research Service is the primary research agency of the Department and should therefore conduct all research which the Secretary deems necessary.

Answer. FSIS does not conduct or fund research. In the past, FSIS has performed some methods development work which is a kind of applied research. However, we have asked and ARS has agreed to perform this work for us beginning in fiscal year 1996.

Question. Please explain how the ARS' pathogen reduction research fits into the HACCP inspection program and why it is important.

Answer. ARS conducts food safety research, some of which is focused on pathogen reduction. Some of its pathogen reduction research is directly responsive to FSIS requests. This includes research on effectiveness of anti-microbial treatments, food pathogen risk assessment technologies, rapid pathogen detection and diagnostic methods necessary for monitoring HACCP.

EGG PRODUCT INSPECTION

Question. Please provide detailed accounting of staff year and funding level for egg product inspection for the past four fiscal years and the budget for fiscal year 1997.

Answer. I will be happy to supply the information for the record. [The information follows:]

	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
Staff Years:	180	180	178	184	179	178
Funding (\$000):						
Salaries & Benefits	\$7,827	\$8,180	\$8,586	\$8,673	\$8,899	\$9,109
Travel	541	433	434	576	569	554
Other Operating Expenses	<u>2,038</u>	<u>1,528</u>	<u>1,708</u>	<u>1,610</u>	<u>1,611</u>	<u>1,609</u>
Total	<u>10,406</u>	<u>10,141</u>	<u>10,728</u>	<u>10,859</u>	<u>11,079</u>	<u>11,272</u>

EGG REFRIGERATION

Question. Please provide the Subcommittee with a status report of the 1991 amendments to the Egg Products Inspection Act requiring shell eggs packed into containers destined for the consumer to be held and transported under refrigerated conditions of no greater than 45 degrees Fahrenheit. Specifically, please address the reason(s) the amendments have yet to be implemented, and why a Final Rule was never promulgated after the Proposed Rule was issued in 1992.

Answer. Comments on the proposed rule identified significant concerns over achieving compliance with the requirements and exemptions from the requirements. In its last session, Congress considered legislation to amend the Egg Products Inspection Act to obviate these areas of concern. The Department did not support those amendments due to an over-riding concern about the efficacy of an ambient air temperature requirement in addressing the growth of pathogenic organisms.

While the benefits of refrigerating shell eggs to various temperatures below 50 degrees Fahrenheit has been demonstrated, the Department is unaware of any demonstration of the effects of ambient air temperature that considers other relevant variables that would affect the temperature of the egg. (Such variables include characteristics of packing materials, the temperature of eggs entering storage, and the density of the palletized loads.) Intuitively one might suppose that an ambient air temperature requirement would be better than no requirement at all. Also, establishing a 45 degree Fahrenheit mark would intuitively seem more effective than a 50 degree Fahrenheit mark, but not as effective as a 35 degree Fahrenheit mark. In reality, establishing any ambient air

temperature requirement, without correlating it in some way to the temperature history of the stored egg, is arbitrary. Storage temperature requirements should be related to a temperature history for the egg, or even more appropriately to some demonstrated effect on the lag time for growth of Salmonella Enteritidis. The establishment of a performance standard along the line of egg temperatures or Salmonella Enteritidis growth would allow businesses to take into account the unique characteristics of their facilities and operations. A simple ambient air standard would not.

In response to this concern, as well as to issues arising from FSIS' February 3, 1995 regulatory proposal concerning the establishment of time and temperature requirements for chilling meat and poultry products, FSIS intends to hold a two-day technical conference to discuss time and temperature standards in general. The merits of any such standards and alternative approaches for achieving the goal of preventing temperature abuse will be discussed. Further Departmental action on this issue will be considered after that conference.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

NEW POULTRY PROCESSING TECHNIQUE

Question. I understand the Stork Gamco Company has developed a new poultry processing technique that will provide new efficiencies for the poultry industry and, I am told, poultry companies in my state and other states are eager for FSIS to approve this new technique. However, I understand FSIS has not approved this procedure due to a test finding of increased salmonella related to this process. Was the finding of salmonella at levels higher than what would normally be the range in such a test?

Answer. Stork Gamco has developed an automatic poultry eviscerating system that has productivity advantages for poultry companies. Because it is a new system, it is subject to the regulatory requirements of Code of Federal Regulations 9, part 381.53, and the further requirements of FSIS Directive 11220.1, page 11, which include a requirement that the new system has microbial performance which is better than or equal to the current system.

Trials on the Nu-Tech equipment were conducted in two establishments. The performance of a Nu-Tech line was compared to the performance of a Streamlined Inspection System (SIS) line. While the E. coli results indicated that Nu-Tech met the microbial performance standard, the Salmonella results raised questions about whether the equipment was associated with increases in Salmonella prevalence.

Question. Can you provide an update on the status of agency review of this process?

Answer. On February 28, 1996 Agency officials met with the company and requested further data which would explain the anomalous Salmonella data.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

APHIS COLD TREATMENT FACILITIES

Question. Dr. King, I understand that the Service is evaluating the cold treatment capabilities of a number of ports of entry. How long has this evaluation been going on?

Answer. Since early 1994, the Animal and Plant Health Inspection Service (APHIS) has conducted extensive risk analyses on the possibility of allowing cold treatment of tropical fruit fly host materials under certain conditions at the ports of Atlanta, Georgia; Gulfport, Mississippi; and Seattle, Washington.

Question. Where is the notice in the Department's clearance process?

Answer. The proposed rule has been drafted, and is currently being reviewed for conformance with the Reduction in Paperwork Act.

Question. When will the announcement be published in the Federal Register?

Answer. It is uncertain at this time when the announcement will be published in the Federal Register.

Question. Can you assure this panel that your notice will appear by mid April?

Answer. Precise predictions in rule making are not possible, and it is unlikely that the notice will appear by mid April.

Question. I believe this is at least the second time that several ports of entry, including Gulfport, Mississippi, have been evaluated for cold treatment. Could you briefly describe what constitutes a qualified cold treatment capability?

Answer. APHIS authorizes the cold treatment of fruits from specified countries of origin; rigid adherence to specified temperatures and time periods effectively eliminates certain insect infestations on imported fruit. Regulation 7CFR319.56-2d Administrative Instructions for Cold Treatments of Certain Fruits discusses the treatments authorized and the place and manner of treatments. Cold treatment facilities also require barriers and safeguards that prevent the introduction of fruit flies and other insect pests into the United States in the unlikely event that they escape from shipments of fruit before undergoing cold treatment. Ports are assigned to a risk group based on a number of criteria, including the individual port's latitude, microclimate, immediate host availability, and past fruit fly infestations.

Gulfport, Mississippi, has been evaluated to allow the approval of a cold treatment facility. Because of the southern location of the port, there is an increased risk of fruit fly escape due to the possibility of untreated fruit warming up to temperatures that would allow any insect pests that may be in the fruit to become more active. Therefore, in addition to the requirements in 7 CFR 319.56-2d (b) (5) (I) through (b) (5) (iii) the following requirements would apply:

1. All fruit entering the port for cold treatment must move in maritime containers; no bulk shipments would be allowed;

2. Within the container, the fruit intended for cold treatment must be enclosed in fruit fly-proof packaging that prevents the escape of adult, larval, or pupal fruit flies;

3. Containerized shipments of fruit requiring cold treatment would be restricted to movement within the port and treated within the area over which the Bureau of Customs is assigned authority;

4. APHIS and the cold treatment facility must agree in advance on a restricted area defined according to host material, time of year, and safeguards, in which shipments are allowed to move between the vessel on which they arrived at the port and the cold treatment facility;

5. Advance reservations for cold treatment space must be made prior to the departure of a shipment from its port of origin;

6. Unloading of fruit from the container into the cold treatment facility must be done within the cold treatment facility, and untreated fruit may not be exposed to the outdoors under any circumstances;

7. The cold treatment facility must remain locked during non-working hours;

8. Fruitfly trapping methods must be used within the cold treatment facility and within the 4 square miles surrounding the cold treatment facility;

9. During cold treatment, a backup system must be available to cold treat the shipments of fruit should the primary cold room malfunction and the facility must also have one or more cold holding rooms and methods of identifying lots of treated and untreated fruit;

10. The cold treatment facility must have the ability to conduct methyl bromide fumigations on site and the site must be approved by APHIS; and,

11. The cold treatment facility must have contingency plans, approved by APHIS, for safely destroying or disposing of fruit.

APHIS BUILDINGS AND FACILITIES ACCOUNT

In 1995, this subcommittee proposed to rescind funds from unobligated balances of the APHIS buildings and facilities account. At the time, the account had an unobligated balance over \$30 million. The Department opposed this request, but later that year, proposed to transfer funds from this account for Mediterranean Fruit Fly control. The fiscal year 1997 request for the buildings and facilities account is \$3.2 million.

Question. Why did the Department oppose the Congressional proposal to rescind these funds, and then propose to reprogram them?

Answer. In December 1994 (early FY 1995), the Department was considering options to fund the Mediterranean fruit fly (Medfly) emergency program. Together with a \$7.4 million transfer from the Commodity Credit Corporation (CCC), we proposed to allocate \$2 million from the APHIS Contingency Fund and to transfer \$3.3 million from the APHIS Buildings and Facilities (B&F) Account. At the time, the B&F account had accumulated an unobligated balance of nearly \$40 million (about 75 percent of this amount was funding appropriated in earlier years and earmarked for the Germplasm facility and the Wildlife Research Center). The FY 1995 appropriation amount for the B&F account was \$6.9 million, all for routine maintenance and repairs (no funds were earmarked for specific projects).

In January-February 1995, Congress was considering an Urgent Supplemental-Rescissions bill. Noting the reported unobligated balance, the Senate Appropriations Committee proposed to rescind \$6 million from the APHIS B&F account. The Senate was not aware of the proposal to transfer \$3.3 million for the Medfly program because we were still considering the proposal. The Senate proceeded to pass a bill that included the \$6 million rescission. The House did not propose any rescission from the B&F account.

The Administration officially opposed the Senate's proposal because we knew that it was likely that we would have to transfer \$3.3 million from the account to the Medfly program. The Conference ultimately set the rescission at \$2 million.

In June/July we notified the Senate and House Appropriations Committees of our intention to transfer the \$3.3 million from the B&F account to the Medfly program, as proposed. Senator Cochran objected to this action and so notified the Secretary. In September 1995, we decided to transfer an additional \$2.9 million from CCC to APHIS for the Medfly program. This allowed the Agency to reduce the B&F transfer to \$1 million.

Question. What has transpired that has caused the agency to reduce its request so substantially?

Answer. We made good progress on our backlog of maintenance and repair projects in FY 1995. We have reduced the B&F account unobligated balance to about \$31 million. Over two-thirds of this remains for the Germplasm facility. We believe that we can forego additional B&F funding for one fiscal year to allow us to concentrate our efforts on the highest priority items on our list, including beginning construction on the Germplasm center.

Question. APHIS has only obligated about \$13 million from this account each year for the past two years. What changes have been made that will enable the obligation of twice this amount in FY 97?

Answer. APHIS anticipates awarding the construction contracts associated with the National Plant Germplasm Quarantine Center, Phase I and II, in FY 1997, and will begin design of Phase III, thereby obligating \$22 million. We are also planning to obligate \$3.2 for continued modernization of Plum Island and \$2.7 for general B&F activities.

Question. What is the status of the Plum Island Animal Disease Center modernization program? What are the projected total costs of this project? What is the APHIS share of this cost? How was this cost division reached? When is work projected to be completed at this facility?

Answer. In FY 1996 and FY 1997, \$3.2 million is planned for the APHIS share for the modernization program. The Agricultural Research Service (ARS)/APHIS Joint Use Projects Committee met on March 7, 1996 to identify and prioritize the projects to be included in the Plum Island Animal Disease Center (PIADC) environmental and modernization projects for FY 1996 and FY 1997. They are scheduled to meet again on August 14, 1996, to discuss project status, progress and need.

The Facility Condition and Code Deficiency Study performed in 1990 (of the Plum Island complex) by the engineering consulting firm of STV, Inc., Pottstown, Pennsylvania, identified 54 construction projects at a cost of \$81 million in FY 1995 dollars. There were extensive discussions in 1992 of the total facility needs of PIADC which increased the cost to \$119 million. In 1996, ARS is projecting the total cost to be \$90 million.

Based on interagency cost share agreements negotiated in 1990, APHIS' share is 39 percent of the total modernization effort.

The distribution of programmed costs was established in a Memorandum of Agreement executed by the two agencies (ARS and APHIS) in 1989 and again in 1994 based upon biocontainment laboratory space allocated to the two agencies at Plum Island (ARS 61 percent, APHIS 39 percent).

The agencies' original plan was to accomplish the Modernization Program in 10 years, by funding it at a rate of up to \$10 million annually. The funding for this program was first received in FY 1993. With a 10 year projection, it was to be completed in 2002. Due to the inconsistent nature of the funding thus far, it is now anticipated that the Modernization Program will take longer to complete and at increased costs. In 1996, ARS is projecting completion by 2006. The completion date will depend upon needed funding being available.

BOLL WEEVIL ERADICATION PROGRAM

The FY 97 budget request for the boll weevil eradication program is \$9.8 million, this amount is \$8.25 million less than the FY 96 appropriation. The budget also reflects a staff year reduction of 24 from the FY 96 level. I understand that there have been several areas which have recalled the referenda under which their respective boll weevil eradication programs were established.

Question. What effect will these funding and staff year reductions have on the continuation of the program?

Answer. Cotton grower leaders have, in recent years, requested an acceleration of the proposed timeframe for completing Boll Weevil Eradication. Their revised schedule calls for moving significant acreage into the program in each of the next several years. Overall funding constraints and demands on our resources do not allow us to continue the traditional levels of Federal involvement in personnel and funding.

The boll weevil program is, therefore, making a transition toward a predominantly grower-funded and grower-managed program. Since FY 1995, the National Cotton Council is not allowing new growers referenda to be contingent on Federal funding. As current program areas are completed, the number of Federal personnel needed by the program will be reduced.

Question. Please provide a detailed explanation of program expenditures for the areas that will participate in the boll weevil eradication program this year.

Answer. The information follows:

**FY 1996 Boll Weevil Eradication Projected Cost
(\$000)**

	<u>Non-Federal</u>	<u>Federal</u>	<u>Total</u>
Southwest	\$702	\$400	\$1,102
Texas:			
High Plains	13,000	500	13,500
Southern RP	2,000	3,083	5,083
RP Central	6,375	353	6,728
So. Texas	22,417	353	22,770
Southeast	9,200	10,500	19,700
Indirect costs		<u>2,895</u>	
FY 1996 Appropriation		\$18,084	

In FY 1997, any Federal funds appropriated would be allocated after consulting with the National Cotton Council. If positive grower referenda are not passed in the Mid-South during 1996, it seems likely that an increasing percentage of funding would move to Texas and possibly Oklahoma in FY 1997.

AQUACULTURE

The budget includes an increase of almost \$200,000 for the APHIS aquaculture program.

Question. How will these additional funds be used?

Answer. The \$199,000 increase will allow APHIS to begin the implementation of a disease prevention and voluntary health certification program for the aquaculture industry. Approximately \$110,000 would be used for the production of aquatic animal reference products and reagents at the National Veterinary Services Laboratories (NVSL). These products and reagents will be used at NVSL and provided to other laboratories as industry standards. APHIS would also be able to implement an "approved and standard" procedure for satellite laboratory facilities and network those labs with NVSL to provide monitoring and disease surveillance reporting. The

remaining \$89,000 would be used to develop state certification sites; to publish and distribute informational materials on disease prevention and sanitation; to establish training for field personnel in key aquaculture states on aquatic diseases; and to develop a database which can be used for collecting, analyzing, and disseminating information on aquatic animal health, producer participants, and broodstock registrations.

Question. Please provide an update of the progress of APHIS aquaculture efforts.

Answer. APHIS has hired three wildlife biologists to work closely with aquaculture producers in Mississippi, Florida, and Alabama. They have drafted a Cormorant Management Plan, which will serve as the basis for efforts to manage cormorant predation on commercial fish as well as discussions with the State and Federal wildlife agencies. APHIS personnel are also working with the U.S. Fish and Wildlife Service (FWS) on the development of a cormorant depredation order which would allow cormorants causing damage to aquaculture resources to be taken without the need of a migratory bird depredation permit. APHIS continues to assist producers throughout the United States with all aspects of reducing wildlife damage to aquaculture resources, including helping producers obtain the necessary permits from FWS.

APHIS and catfish farmers are also working together on a relatively new damage abatement technique which involves the relocation of cormorants, through roost dispersal, away from areas of intense catfish production.

During FY 1995, APHIS established and sponsored an Aquaculture Industries Round Table to discuss issues on trade and aquatic animal health. An APHIS team of specialists participated on the Round Table as a medium through which to provide services to the aquaculture industry. APHIS also selected a National Aquaculture Coordinator to provide coordination between the APHIS team and the aquaculture industries. In addition, an Interagency Aquaculture Working Group was formed on aquatic animal export certification in view of the European Union (EU) framework on equivalence. This group is responsible for responding to the EU bilateral agreements.

In FY 1995, APHIS drafted a legislative proposal entitled the "Aquaculture Health Protection, Trade, and Improvement Act of 1995." The purpose of this Act is to prevent the introduction and/or dissemination of disease, pathogens, or pests detrimental to aquaculture by giving the Secretary of Agriculture the authority to monitor and regulate international trade and interstate movements of aquatic animals, plants, and products. This proposal is currently in the legislative review process.

The voluntary certification and inspection program for aquacultural products established by APHIS in the States of Washington and Alaska in May 1994 has endorsed export health certificates for approximately 69.2 million salmonid hatching eggs through April 4, 1995. Of the 69.2 million hatching eggs, 69.0 million were shipped to Chile; 100 thousand were shipped to Columbia; and 55 thousand were shipped to Japan. Fish species currently being certified in this program are rainbow trout, Donaldson steelhead trout, Atlantic salmon, and coho salmon.

APHIS endorsed 2.4 million live fish for export in FY 1995. Fish were exported to 41 countries with the States of Florida, Maryland, and New York as the main exporters.

Question. What are the Department's current estimates of losses incurred by fish farmers due to bird depredation?

Answer. The loss of fish to bird depredation is estimated at \$9 million due to cormorants in Alabama, Arkansas, Louisiana, and Mississippi; \$1.2 million due to damage by great blue herons in Mississippi; and \$150,000 to \$225,000 in damage caused by pelicans in Mississippi. Loss estimates to aquaculture for additional bird species have not been developed.

The Agricultural Research Service operates the National Warmwater Aquaculture Research Center.

Question. Does APHIS coordinate its research with the National Warmwater Center to ensure that there is no duplication of effort? Could the National Warmwater Center provide services for which APHIS currently contracts at a lower cost to the agency?

Answer. The goal of the APHIS aquaculture program is to assist the aquaculture industry in controlling aquatic diseases and pests, and to facilitate the movement of aquatic animals and products in interstate and international commerce.

APHIS research on aquaculture is conducted by the Denver Wildlife Research Center (DWRC) and focuses on methods of reducing depredation from large populations of fish-eating birds. The ARS National Warmwater Aquaculture Research Center (NWARC) is an initiative which will focus on improving catfish production efficiency. Although the aquacultural research emphasis is very different between the two projects, APHIS will maintain contact with ARS to avoid any possible duplication and because the efforts may very well complement each other.

APHIS' DWRC research efforts to reduce depredation from large populations of fish-eating birds are conducted by APHIS scientists and currently do not involve outside contracted research services. If future aquacultural research efforts indicate a need for contract services, APHIS will investigate the most cost-effective means of obtaining those services, including possible resources such as the NWARC.

NATIONAL PERFORMANCE REVIEW

Monday's *Washington Post* included an article on the pilot sites or "reinvention labs" that were selected to develop and test new approaches to improving agency performance as a result of the Vice President's national performance review. According to the article, USDA has 12 of these "laboratories." The article highlights that some agencies have had to seek waivers from their established regulations in order to implement these "labs." It is my understanding that the Animal and Plant Health Inspection Service is one of the agencies of USDA participating in this program.

Question. Has APHIS sought waivers in connection with this exercise?

Answer. For the pilot program, no waivers were requested or needed. As APHIS completes evaluation of this initiative, waivers or special authority in connection with it may be requested.

Question. How much has APHIS's participation in this exercise cost, and what, if any, savings were realized? Where are these savings reflected in the budget?

Answer. APHIS has not incurred additional salary costs to conduct a pilot program under this initiative. APHIS relocated three employees, already on board, to initiate, evaluate, and assist in the implementation of this initiative. The Agency has spent approximately \$30,000 in travel associated with this initiative. APHIS has not realized any savings as a result of our participation in this exercise, although to date, it is too early to determine the future feasibility of or the savings associated with implementing "reinvention labs" in APHIS.

Although the Agency's budget request does not reflect any savings associated with this initiative, improved program service delivery is expected.

MEXICAN AVOCADOS

It is my understanding that the Department has proposed regulations regarding the importation of avocados from Mexico to certain parts of the United States. These regulations have met with a certain amount of opposition from domestic avocado producers who fear that allowing foreign avocados into the United States may threaten domestic production with new pests and diseases.

Question. What is the status of this regulation?

Answer. The final rule is still undergoing Department review and we hope to reach a decision soon. We continue to assure concerned stakeholders, including members of Congress, state, and industry officials that any decision to change our current regulatory requirements will be based on a full range of credible scientific evidence in pest risk assessment and risk management, ensuring that adequate safeguards are in place.

Question. What is the Department doing to ensure that domestic avocado production will be protected?

Answer. We received 2,100 written and oral comments and made every effort to ensure that all concerned stakeholders had an opportunity to provide input on proposed regulatory changes. We reviewed all the comments submitted and are examining the proposed rule based on this information as well as legal and economic implications of the proposal. Should the decision be made to allow the restricted importation of avocados from Mexico, we are identifying multiple mitigatory measures as part of the proposed importation proposal that would prevent infested Haas avocados from entering the United States. Other measures might include inspections at any stops in the United States en route to the northeast, and upon arrival at the terminal market to ensure they are being moved in compliance with APHIS regulations.

AGRICULTURAL QUARANTINE INSPECTION AND PRECLEARANCE INSPECTION

The Senate report accompanying the fiscal year 1996 Agriculture Appropriations Act included language urging the Department to respond to agricultural quarantine inspection and staffing and equipment needs at major airports, and preclearance inspection staffing shortages in Puerto Rico and Hawaii.

Question. Has the agency taken any action in response to this report language?

Answer. On February 28, 1996, APHIS received authority to spend \$26.8 million above the appropriated funds to hire 217 new inspectors. A significant number of vacancies in high risk ports are projected to be filled by May 1. In addition, APHIS already ordered the equipment to connect the Custom Service's Automated Cargo System for the Los Angeles airport (LAX). LAX will be used as the model to implement this system in all other High and medium traffic airports in the U.S. There was no increased funding for staffing in Hawaii or Puerto Rico; therefore we do not plan to increase staffing this year. The Agency has included funding for increased staffing in Hawaii in the FY 1997 request. The Agency continues to evaluate predeparture inspections at both Puerto Rico and Hawaii.

Also included in this section was language encouraging the Department to explore new technologies and innovation at high-volume inspection sites.

Question. Has the agency taken any action in response to this report language.

Answer. APHIS is continuing to explore new technologies and inspection methods. We are currently working with the Department of Defense to develop a mobile X-ray machine. We are also in the process of purchasing equipment for all large- and medium-sized ports to connect to Custom's Automated Cargo System. We have installed a new voluntary disposal bin in a few airports which seems to be successful. Passengers may dispose of contraband before clearance.

APHIS, in cooperation with the Customs Service, the Immigration and Naturalization Service, and the State Department, is participating in the Border Process Reengineering (BPR) initiative which was developed to improve efficiency, effectiveness, and cycle times of primary travelers and vehicles processing through the integrated inspection process at airports and on the northern and southern borders. Miami International Airport was designated as a National Performance Review Reinvention Lab and will also test many of the BPR recommendations. Nine other ports were selected for the pilot tests.

The budget request again includes language which removes the annual limitation on the utilization of funds in the Agricultural Quarantine Inspection user fee account and would allow the agency to utilize those funds without Congressional control. Congress included this language in the fiscal year 1996 Agriculture Appropriations Act.

Question. What is the current balance of the Animal Quarantine Inspection user fee account?

Answer. The current balance is \$69,030,536 as of September 30, 1995.

Question. Will the action that the Agriculture Committees took on the AQI account have any effect on the agency's request for the inclusion of this language?

Answer. The action taken by Agriculture Committees on the Agricultural Quarantine Inspection (AQI) account gives APHIS authority to spend any amounts collected over \$100 million without further fiscal year or appropriation limitation between FY 1996 and FY 2002. The estimated AQI revenue for FY 1997 is \$114 million and the estimated expenses are \$125 million. APHIS accesses the AQI user fee account reserve to continue program activities without interruptions.

ANIMAL DAMAGE CONTROL OPERATIONS - PROPOSED REDUCTIONS

The FY 97 budget for animal damage control contains no adjustments from the FY 96 appropriation. The FY 96 budget proposed reductions in the animal damage control program that were to be achieved in part through the closure of statewide ADC offices in seven states, by the closure of 15 district offices, and the subsequent reduction of 138 staff officers.

Question. Were these office closures and staff reductions made?

Answer. Because the FY 1996 Appropriation for Animal Damage Control (ADC) operations was maintained at the FY 1995 level, it has not become necessary to proceed with the proposed office closures and staff year reductions.

Question. What effect will this freeze budget have on this program?

Answer. Because the FY 1996 Appropriation for ADC operations was not reduced, the program is continuing to operate at approximately the same level as in FY 1995. Increased operating costs for inflation and pay costs are partially offset in FY 1996, due to several early retirements which occurred in 1995. This results in a situation however, in which the program has additional available funds through salary lapse to help cover increased costs, but the number of Federal ADC employees available to respond to requests for assistance is reduced. The effects of increased operating costs on funding will be more severe in FY 1997, prohibiting ADC operations from entering into any new cost-shared cooperative agreements, and will most likely force States to increase their contributions to existing agreements to maintain current levels of accomplishment. The programs' ability to respond to requests for assistance is expected to remain at approximately the same level as is currently provided.

BEAVER CONTROL IN MISSISSIPPI

The Senate report accompanying the fiscal year 1996 Agriculture Appropriations Act included an additional \$75,000 for beaver control in Mississippi.

Question. Please provide a brief explanation of APHIS' accomplishments in this area.

Answer. APHIS continues to administer the Beaver Control Assistance Program (BCAP) in the State of Mississippi. APHIS personnel respond to requests for assistance resulting from damage caused to State and County highways and private property, including crops and timber. In FY 1995, approximately \$1.1 million in resource losses were reported to ADC. Through an integrated wildlife damage management approach, APHIS is working to resolve beaver damage to State highways in all 82 Mississippi Counties. Assistance is also provided to private landowners and county highway departments in the 50-member counties enrolled in BCAP.

Beaver damage management also continues on the Delta National Forest. According to Forest Service officials, 10,000 acres of the forest are affected by beaver damage, including the annual loss of 250 to 500 acres of forest timber valued at approximately \$375,000 to \$750,000. APHIS is responding to this situation with the implementation of a three-phase management project. The first phase of this project is a beaver trapping program to reduce local beaver populations. This phase was concluded at the end of March 1996. This will be followed by the installation of water control structures and road culvert exclusion devices in April 1996. A local population management program will resume in September and conclude at the end of October 1996. Additional assistance will be provided as resources allow.

Question. Is funding included in the budget to continue this work?

Answer. In FY 1996, APHIS will spend approximately \$150,000 specifically for beaver damage control in Mississippi. In addition, \$100,000 has been allocated for ADC operations work in Mississippi which includes beaver damage control efforts. APHIS anticipates allocating similar amounts toward beaver control efforts in Mississippi in FY 1997.

PSEUDORABIES

The budget proposes FY 97 funding for the pseudorabies program at \$4.5 million, only a few thousand dollars less than the FY 96 appropriation.

Question. What is the target year for pseudorabies eradication?

Answer. The goal of eradication is the year 2000.

Question. Will the target be affected at this funding level?

Answer. No. During the past fiscal year, each State has made significant progress towards eradicating pseudorabies. If the States continue to make significant progress, this funding level should have no significant impact on the projected eradication date.

Last year, the agency testified that its request level would be adequate to meet the needs of this program. However, producer groups disagreed with this assessment, and the Department confirmed their assertions. The producer groups then urged this subcommittee to provide additional funding, which we did.

Question. Is the FY 97 request adequate?

Answer. Yes, the FY 1997 request is adequate. APHIS fully supports this cooperative State-Federal-industry program to eradicate pseudorabies. Program expertise attained by the States and industry will provide a greater share of support. With this level of funding and continued strong efforts by program participants, the United States could be free of pseudorabies as planned.

NATIONAL POULTRY IMPROVEMENT PROGRAM

It is my understanding that the National Poultry Improvement Program is currently operating on a budget of \$12 million, with 62 percent of the cost of the program paid by the poultry industry, 36 percent by individual states and 2 percent by USDA. This is roughly the same level of funding as FY 96.

Question. How can APHIS put more emphasis on this highly successful program in the future?

Answer. The success of the National Poultry Improvement Plan (NPPI) has resulted in the virtual elimination of pullorum and typhoid diseases from the commercial poultry industry. Death and condemnation losses due to chronic respiratory disease caused by mycoplasmosis have also been effectively controlled in the turkey and chicken meat industry. This program provides for efficient, low-cost movement of poultry products with minimal restrictions. The virtual elimination of these economically important diseases has benefited our poultry breeders in developing their export markets.

APHIS can expand emphasis on this program in the future by conducting public media campaigns to promote the program and its success, including issuing press releases and preparing informational brochures. These public campaigns should further enhance the program's credibility in the export market place.

Question. This program has been regarded by the poultry industry as highly effective. At one time this program had a line-item in the APHIS budget. What is the proposed funding level for this program in FY 97?

Answer. The NPPI line-item was eliminated in FY 1994, but the program and its related funding were merged into the Animal Health Monitoring and Surveillance line-item. The proposed funding level for the NPPI portion of this program in FY 1997 is the same as for the last several years, at approximately \$240,000.

USER FEE PROPOSALS

The fiscal year 1997 budget includes three legislative proposals to require beneficiaries of services provided by the Animal and Plant Health and Inspection Service to pay the costs of these services. User fees are proposed:

- (1) To impose fees on facilities and establishments required to be registered under the Animal Welfare Act, but currently not subject to a fee. This proposal is estimated to save \$3 million.

- (2) To allow for the collection of fees for veterinary biologics licensing, inspection and testing activities. This proposal is estimated to save \$3.5 million.
- (3) To impose fees on industries licensed under the Virus-Serum-Toxin Act and authorized for field tests, movements, and importation of biotechnologically derived products under the Federal Plant Pest Act and the Plant Quarantine Act. This proposal is estimated to save \$1.0 million.

Question. Has the Administration submitted its legislative proposals to charge fees for Animal Welfare Act registrants, veterinary biologics licensees, and Virus-Serum-Toxin Act Licensees?

Answer. The legislation was submitted to the Agriculture Subcommittee on August 4, 1995.

Question. What level of fees would a user be required to pay under these proposals?

Answer. The fees for each activity have not been determined. They will be determined and published in the Federal Register for public comment after legislative authority is granted by Congress.

Question. How would these fees affect the research at universities, the development of new biotechnology-derived products, and other new veterinary biologics?

Answer. Universities and State and Federal government would be exempt from these fees. These fees will not have an adverse impact on the development of biotechnology-derived or new veterinary biologics products. By implementing user fees, APHIS would recover costs associated with providing these services, thereby having resources available to process new products into the marketplace without delay.

EQUINE PIROPLASMOSIS

At our hearing on Tuesday with Secretary Glickman, Senator McConnell of Kentucky raised his concern about the potential hazard to U.S. horse owners from equine piroplasmosis. The risk to these owners is due to introduction of horses into the United States for the Olympics. My constituents have contacted me expressing their concern about this disease as well.

Question. What are you doing to protect domestic horse owners?

Answer. USDA will ensure that the equine piroplasmosis positive horses are identified prior to import. After their arrival and initial quarantine, they will be transported under seal to the Georgia International Horse Park. The horses will be housed in a fenced, quarantined, isolated area, free of vegetation, and will be checked regularly for ticks. Regularly scheduled pesticide treatments will be applied to the area. The stable and the exercise area will be fenced to prevent the entry or exit of unauthorized people or other animals. This fenced in area will be supervised 24 hours a day by USDA and Georgia Department of Agriculture personnel. At the conclusion of the games, the horses will be transported under

seal to the airport where they will be returned to their countries of origin.

If the competitors do not comply with the regulations for having these horses in the country, USDA has the authority to have the horses removed from the country. The event organizers have made arrangements to have charter planes available on short notice if a horse needs to be removed from the country.

Question. The statement of managers accompanying the Farm Bill conference report includes language on this issue. Do you intend to comply with this report language?

Answer. Yes, we intend to comply with this report language. In addition, these horses will not be allowed to compete in the cross country events further protecting the health of the uninfected horses.

TROPICAL SODA APPLE

In the Senate report accompanying the fiscal year 1996 Agriculture Appropriations Act, language was included encouraging the Department to continue efforts to eradicate *Orobanche ramosa* in Texas and tropical soda apple in the Southeast.

Question. Please provide the committee with an update on the Department's efforts on these two noxious weeds. Is there funding included in the budget to continue to address these noxious weeds?

Answer. The APHIS *Orobanche ramosa* program covers 74 linear miles of highway right-of-way representing 400 infested acres in Karnes County, Texas. This eradication program has been turned over to Karnes County, Texas. APHIS is supervising the program and is providing technical expertise and assistance. In past years, the program has been stalled by the resistance of a landowner to allow program officials on his land. But since this owner is now allowing full access to his land, the program can continue. Currently, the County is applying treatments to 120 infested acres on this property and considers 40 of these acres to be heavily infested. In FY 1995, APHIS eradicated isolated infestations outside this property and we are confident that there has been no reproduction in the areas outside of the property. The Agency is providing \$55,000 to Texas for the *Orobanche Ramosa* eradication program in FY 1996 and plans to provide the same amount in FY 1997. But since the seeds can survive for at least 10 years in the soil, eradication can only be verified with ten years of negative survey after the last sighting.

In July 1995, APHIS listed Tropical Soda Apple (TSA) in the Federal Register as a Federal Noxious Weed. This allows us to assist in reducing the weed's entry into the United States and its spread into noninfested areas of the country. TSA may now only be moved into or through the United States under a written permit and under conditions that would not involve a danger of its dissemination. Because cattle that feed on TSA fruit are the primary means of the plant's dispersal, APHIS has worked with the Florida State veterinarian to determine the destination of all cattle shipped from infested areas of Florida over the past two years and to identify high risk areas. These areas are being closely monitored by both APHIS and the States, and any TSA plants will be destroyed. APHIS is

aware of other avenues of artificial spread and is monitoring these areas.

To address TSA outbreaks in the Southeast, APHIS is concentrating its efforts on education, survey, and management. In the fall of 1995, APHIS and State personnel conducted surveys in Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Puerto Rico to determine the extent of the weed's dispersal. In these surveys, no TSA was found other than in South Carolina, where only a few infested plants were found. The areas that were surveyed were high-risk areas where cattle shipments from Florida were delivered. APHIS will continue cooperating with the States, industry, and the public to protect the U.S. from TSA and to avert the potential economic and ecological disaster that TSA could cause. APHIS' plans involve developing a strategy for preventing further spread of TSA. This strategy will be developed in cooperation with the Southern Plant Board, affected States, and private industry. In addition, APHIS continued to encourage land owners to eliminate incipient infestations as soon as they are detected, either by digging up the plants or applying herbicide treatments. The Agency has been working with the States and the Extension Service to develop and distribute fact sheets to educate the public about the potentially devastating effects of TSA. Also, APHIS is using data collected on cattle shipments from Florida to inform the States of high risk areas that may require surveys. The results of these surveys are being recorded in the APHIS' National Agricultural Pest Information System database. Approximately \$100,000 is included in our FY 1997 budget in our Plant Pest Survey line for TSA surveys and limited control work. Also, we are exploring the possibility of cooperating with the Agricultural Research Service in a biocontrol project to control TSA.

PLANT PEST SURVEYS

The budget request includes an increase from the FY 96 level of \$1.9 million for plant pest surveys.

Question. Please provide an explanation of this request and the plant pest survey program.

Answer. With this increase, APHIS would address various issues related to our rangeland grasshopper program, such as fully funding survey activities, implementing a new Environmental Impact statement (EIS), and using exotic organisms as biocontrol agents. In addition, we would provide site-specific environmental assessments and public meeting options for potential grasshopper treatment sites, effectively monitor outbreak populations in rangeland areas to predict economic losses, and provide economic population data to land managers. The increase also enables us to maintain the Cooperative Agricultural Pest Survey (CAPS) network in up to 12 additional (48 total) States and to conduct 15 additional (85 total) survey projects and 12 additional (48 total) data management projects for pest detection. The enhancement of pest detection activities will serve to support the competitive position of U.S. agricultural products in global markets and help APHIS meet requirements established under the General Agreement on Tariffs and Trade (GATT) and the North American

Free Trade Agreement (NAFTA). The accurate and timely biological information that this program generates supports decisionmaking which maximizes the efficiency of pest management expenditures.

The Plant Pest Survey program monitors the effectiveness of APHIS plant pest management programs and provides early detection of exotic plant pests to prevent sustained infestation. Through this line item, the Agency conducts surveys to effectively detect new infestations of exotic pests, fully supports post-eradication activities, and facilitates the entry of U.S. agricultural products into international markets. This functional line item combines the domestic survey and detection activities of 9 existing line items: fruit fly detection, plant pest detection, grasshopper, gypsy moth, imported fire ant, miscellaneous plant pests and diseases, noxious weeds, pink bollworm, and witchweed. Objectives are to facilitate the entry of U.S. agricultural products into domestic and international markets, thereby helping APHIS meet requirements established under GATT and NAFTA; conduct surveys to detect exotic pest infestations before they become established; support post-eradication activities to maintain program progress; and protect and enhance plant resources. The surveys conducted will demonstrate areas of freedom and low pest prevalence as specified in international standards.

BRUCELLOSIS ERADICATION

The budget proposes FY 97 funding for the brucellosis program at \$19.9 million, this represents a reduction of \$3.3 million from the FY 96 appropriation. The budget also includes a reduction of 18 staff years.

Question. What is the target year for brucellosis eradication?

Answer. At the current funding level, the target year for brucellosis eradication is the end of 1998.

Question. Will the target be affected at this funding and staffing level?

Answer. The proposed brucellosis funding and staffing level will not affect the target eradication date. APHIS will continue to pursue the goal of eradicating brucellosis at a reduced level. Because of this program's tremendous success, the Agency feels confident in reducing the funding level in FY 1997. We have made remarkable progress since the initiation of the Rapid Completion Plan (RCP) in FY 1991. At the beginning of FY 1991, 959 herds were under quarantine for brucellosis. At the end of FY 1995, there were only 68 herds under quarantine for brucellosis. As of February 29, 1996, 50 herds were under quarantine.

WHITEFLY MANAGEMENT

Question. Please give an explanation of the agency's efforts for whitefly management in FY 96 and FY 97, including staffing levels.

Answer. Our response to the sweetpotato whitefly (SPW) is guided by a 5-year National Research and Action Plan for Development of Management and Control Methodology. This plan will conclude by

January 1997 and provide a firm base for the development of efficient long-term strategies to manage SPW populations.

In FY 1996, APHIS plans to devote approximately \$2.4 million and 25 staff-years to control SPW. With these funds, the Agency plans to develop capabilities to acquire, mass produce, and release exotic natural enemies. After the insects are released, APHIS will monitor their establishment and rate of natural dispersal, and evaluate the biological and economic impact of their attacks on the SPW. Also, we will identify SPW-transmitted viruses and transfer technology on SPW biological control. In addition, APHIS will further evaluate insect pathogens for their ability to control the SPW and develop mass production systems for natural enemies. In addition, the Agency will continue to support foreign exploration and conduct quarantine screening studies. Also, we are studying the effectiveness of exotic natural enemies in commercial greenhouses. To control SPW through the use of natural enemies alone and in combination with integrated pest management, APHIS is involved with conducting whitefly and natural enemy surveys, obtaining natural enemies from the SPW's native home and those found in the United States, and releasing them across the SPW's region of distribution; releasing them into cultivated fields, plantings of ornamentals and greenhouses.

Specifically in FY 1996, we are releasing SPW natural enemies in greenhouses in northeastern States, primarily Connecticut. In this project, we have demonstrated that using biological control techniques against SPW in greenhouses is a very effective management strategy. We are in the process of turning that strategy over to industry. Also in FY 1996, sustainable year-round mass production of parasitoids will allow the field release of approximately six million parasitoids in Alabama, Arizona, California, Florida, Georgia, Mississippi, and Texas to attack SPW. In addition, we are working cooperatively with Texas A&M and ARS to use insects and pathogens in an integrated pest management approach. Regarding this approach, we are experiencing satisfactory results with managing SPW year-round in a variety of crops, such as cucumber, broccoli, and melons.

In FY 1997, the Agency estimates the need for SPW activities to be approximately \$1.9 million and 18 staff-years. Beginning in FY 1997, most operational SPW activities will be funded from the new Biocontrol line item and most scientific and technical activities will be funded from the new Plant Methods and Biocontrol Laboratories line items. However, some of the monitoring and surveillance activities related to SPW and their natural enemies would be conducted under the Plant Pest Survey and Plant Pest Management line items. In FY 1997, APHIS would reduce the number of biocontrol agents imported and screened through quarantine. Also, the Agency would limit the number of locations where releases of natural enemies will be made in testing their impact on SPW control. These reductions will likely have no impact on the spread of the SPW since the pest has probably reached its geographical distribution range in North America. However, APHIS will continue testing natural enemies of SPW at our Phoenix, Arizona Plant Methods Center. Also, the Agency will continue to support a cooperative national integrated pest management effort against the SPW by implementing biological control that emphasizes the mass production of beneficial insects and reduces this pest's economic impact. Despite this decrease, though, the Agency is still working to move the program forward by continuing

cooperative efforts to implement biological control demonstration projects, establish field insectaries, release and distribute natural enemies, develop pest control demonstrations, and collect evaluation data to control SPW in a cooperative effort with collaborators and State agencies. Specifically, APHIS will continue to support a cooperative national Integrated Pest Management (IPM) effort by implementing a biological control phase to reduce the SPW's economic impact. These biological control activities will emphasize the mass production of beneficial insects to reduce this pest's economic impact.

Question. It is my understanding that there have been substantial advances in methods to control whiteflies, including the use of sterile insects. Is the agency capable of producing these sterile flies in the United States or the insect rearing laboratory in Mexico for release in the appropriate area?

Answer. No technology using sterile insects is presently known for SPW control. However, in recent years, APHIS has made significant progress in the areas of biocontrol, IPM techniques, and fundamental research, morphology, behavior, biotypes, and vector interactions. Also, we have made considerable progress in gaining a better understanding of the organisms and developing potential SPW controls. Specifically, we have had major success in developing management strategies for SPW in greenhouses on tomatoes and poinsettias and we have had excellent results with fungal pathogens in melons. Currently, we are looking at ways to combine insects and pathogens for SPW management, both in greenhouses and in field cropping systems.

Also, APHIS is developing ways to control SPW through the use of natural enemies. Specifically, APHIS is involved with identifying genetic SPW and natural enemy species and strains in the United States and other countries of the world, mapping distributions of the strains, and obtaining exotic natural enemy strains which are adapted to the pest strain occurring in this country; conducting tests to determine favorable propagation conditions; identifying whitefly transmitted viruses of crop plants and their alternate plant hosts in the Lower Rio Grande Valley; and integrating pesticide applications, cultural practices, and augmentative releases of natural enemies to develop IPM techniques for numerous cropping systems.

SCREWORM

The budget includes \$31.7 million for the screwworm program, a reduction of \$2.26 million from the FY 96 appropriation.

Question. Is this funding level adequate to continue the successful operation of this program?

Answer. Yes. By FY 1997, the program expects to have eradicated the pest through most of Nicaragua, past the widest point of the Central American isthmus, and to start an active eradication program in Costa Rica, where the total land mass is significantly less. We also expect to be able to safely reduce sterile fly release in Costa Rica and slow down eradication efforts into Panama.

With this request we can maintain Nicaragua pest-free through the release of 120 million sterile flies weekly in FY 1997.

Operations could then begin in earnest in Costa Rica with approximately 60 million sterile flies dispersed per week. Initial cooperative program activities in Costa Rica began in October 1995. Active eradication and aerial dispersal began in April 1996 and will cover the entire country by the end of the fiscal year.

Pending negotiations with the U.S. Department of State, we expect to begin administrative and ground preparation activities in Panama in FY 1997 and sterile fly dispersal in FY 1998 with approximately 80 million sterile flies per week. We anticipate to have screwworm eradicated to the Darien Gap in FY 1999. Once eradication is complete, the barrier maintenance phase will begin.

USDA REORGANIZATION

Question. Please provide a list of all offices of all agencies under the jurisdiction of the Assistant Secretary for Marketing and Inspection Service which have been closed during the past three years, the cost associated with each closure and the net saving. Also, please explain how these savings, if any, were utilized.

Answer. The information is as follows:

ANIMAL AND PLANT HEALTH INSPECTION SERVICE FY 1996 (AS OF APRIL 30)

<u>Office(s)</u> <u>Closed</u>	<u>One-time</u> <u>Cost</u>	<u>First-Year</u> <u>Net Savings</u>
Plant Protection and Quarantine:		
Fort Lauderdale, FL	\$2,000	0
Elizabethtown, NC	0	\$3,376
Regulatory Enforcement:		
Tampa, FL	750	68,000
Sacramento, CA	750	68,000
Veterinary Services:		
Jacksonville, FL	0	48,998

ANIMAL AND PLANT HEALTH INSPECTION SERVICE FY 1995

<u>Office(s)</u> <u>Closed</u>	<u>One-time</u> <u>Cost</u>	<u>First-Year</u> <u>Net Savings</u>
Plant Protection and Quarantine:		
Clearwater, FL	0	\$18,000
Dublin, GA	0	7,000
Alexandria, LA	0	5,115

St. Peters, MO	0	0
Hoboken, NJ	\$320,791	0
Whiteville, NC	238,243	0
Clarion, PA	0	2,790
Meadville, PA	0	2,700
Jacksonville, TX	0	5,172
Levelland, TX	0	1,753
Mission, TX	57,092	0
Ralls, TX	0	3,110
Seattle, WA	14,894	20,420
Veterinary Services:		
Charleston, WV	12,097	77,670
Aguadilla, PR	6,041	6,050
Arecibo, PR	21,575	4,800
Barranquitas, PR	0	5,400
Guanica, PR	0	9,600
Juncos, PR	0	28,200

**ANIMAL AND PLANT HEALTH INSPECTION SERVICE
FY 1994**

<u>Office(s) Closed</u>	<u>One-time Cost</u>	<u>First-Year Net Savings</u>
Animal Care:		
Minneapolis, MN	\$26,000	\$173,393
Plant Protection and Quarantine:		
Oakbrook, IL	0	0
Chestertown, MD	59,055	2,490
North Platte, Nebraska	0	616
Batavia, NY	0	1,400
Dillon, SC	0	3,900
Orangeburg, SC	0	3,450
Regulatory Enforcement:		
Minneapolis, MN	0	147,317
Veterinary Services:		

Bartow, FL	0	4,600
Okeechobee, FL	0	7,200
Alexandria, LA	0	1,666

For the Animal and Plant Health Inspection Service, the savings were used in a number of ways. In the case of Animal Care and Regulatory Enforcement, savings were primarily used to address a recurring need for replacement vehicles and up-to-date computers to enable inspectors and investigators to effectively perform their duties. In the case of Plant Protection and Quarantine offices, savings are typically used in the remaining offices that absorb additional responsibilities from the closed offices, and to cover unfunded cost increases in support of local and/or domestic program needs. For Veterinary Services (VS), savings realized from closing the two small Florida offices are being used to further the effort to eradicate brucellosis in that State.

AGRICULTURAL MARKETING SERVICE
1996 (AS OF APRIL 30)

<u>Office(s) Closed</u>	<u>One-time Cost</u>	<u>First-Year Net Savings</u>
Livestock and Grain Market News:		
West Fargo, ND	\$17,300	\$67,700
Poultry Market News:		
Edison, NJ	172,847	95,153

AGRICULTURAL MARKETING SERVICE
FY 1995

<u>Office(s) Closed</u>	<u>One-time Cost</u>	<u>First-Year Net Savings</u>
Cotton Grading:		
Altus, OK	\$35,000	\$319,000
El Paso, TX	10,000	373,000
Cotton Standardization:		
Clemson, SC	65,000	346,000
Fresh Fruit and Vegetable Grading:		
Sacramento, CA	0	0
Glen Ellyn, IL	0	85,688
Falls Church, VA	750	40,151

Poultry Grading:		
Denver, CO	3,190	94,131
Valrico, FL	0	75,463
Des Moines, IA	0	115,090
West Lafayette, IN	0	122,067
Augusta, ME	0	72,373
Columbia, SC	0	55,514
Livestock and Grain Market News:		
Albany, NY	0	56,000
Meat Grading:		
Arlington, TX	1,000	95,000

**AGRICULTURAL MARKETING SERVICE
FY 1994**

<u>Office(s) Closed</u>	<u>One-time Cost</u>	<u>First-Year Net Savings</u>
Cotton Grading:		
Waco, TX	\$45,000	\$345,000
Greenwood, MS	95,000	363,000
Fresh Fruit and Vegetable Grading:		
Indianapolis, IN	5,755	1,407
Ft. Mitchell, KY	6,154	2,607
Buffalo, NY	0	14,294
Wilkes Barre, PA	0	11,053
Warwick, RI	0	7,485
Memphis, TN	8,402	627
El Paso, TX	7,150	1,785
Salt Lake City, UT	0	1,162
Norfolk, VA	0	4,889
Livestock and Grain Market News:		
National Stockyards, IL	27,500	90,000
Visalia, CA	0	75,000
Milk Market Administrator:		

Germantown, WI	0	500
Stevens Point, WI	0	1,500
Meat Grading:		
Bell, CA	9,500	79,000
Poultry Market News:		
Kansas City, MO	57,171	44,979

For the Agricultural Marketing Service, savings realized from office closings are often utilized in the remaining offices that absorb additional responsibilities from the closed offices. Any additional savings allow AMS appropriation funded programs to absorb unfunded cost increases and user funded programs to reduce or delay raising fees.

**GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION
FY 1996 (THROUGH APRIL 30)**

<u>Office(s)</u> <u>Closed</u>	<u>One-time</u> <u>Cost</u>	<u>First-Year</u> <u>Net Savings</u>
None.		

**GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION
FY 1995**

<u>Office(s)</u> <u>Closed</u>	<u>One-time</u> <u>Cost</u>	<u>First-Year</u> <u>Net Savings</u>
West Memphis, AR	0	\$55,000
Peoria, IL	0	238,000
Indianapolis, IN	\$50,000	153,000
Belle Chase, LA	0	0
Lutcher, LA	0	573,000
Omaha, NE	100,000	250,000
Beaumont, TX	50,000	65,000
Corpus Christi, TX	50,000	54,000
Houston, TX	75,000	90,000
Plainview, TX	100,000	188,000

**GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION
FY 1994**

<u>Office(s) Closed</u>	<u>One-time Cost</u>	<u>First-Year Net Savings</u>
Portland, OR	\$250,000	\$262,000

For the Grain Inspection, Packers and Stockyards Administration, the majority of total costs and savings are from the trust fund account. Savings derived from the office closures were utilized as follows:

1. Trust fund account - help to contain the costs to users of the system; enhance service delivery by streamlining managerial and administrative operations; and employ new monitoring and quality control methodologies to enhance oversight of the national inspection system.
2. Appropriated account - allow for improved delivery and services without a corresponding increase in appropriated dollars.

QUESTIONS SUBMITTED BY SENATOR GORTON

IMPORTATION OF LOGS

Several environmental groups in California have filed a lawsuit challenging the adequacy of the Final Environmental Impact Statement entitled "Importation of Logs, Lumber, and other Unmanufactured Wood Articles." This FEIS was prepared in support of the May 25, 1995, Final Regulations for the import of raw logs and unmanufactured wood articles.

Question. Will your department be able to proceed under these rules to allow for the importations of logs and wood chips while the litigation is pending in the courts?

Answer. We will continue to allow the importation of logs while the litigation is pending.

Under the log importation rule, one of the requirements for protecting the U.S. forests from the threat of exotic insects, diseases or pests that might be brought into U.S. ports on the logs or other materials, is the use of methyl bromide as a fumigant. In fact, it may be the only chemical fumigant permitted. As you know, methyl bromide is scheduled for phaseout by the EPA under the Clean Air Act by the year 2001.

A major pulp and paper facility in my state of Washington (Georgia Pacific in Bellingham) has been working with APHIS and Washington State officials to test the safety and effectiveness of a substitute material. **It has been reported to me that the test results have been favorable, however, the alternative fumigant cannot be used to obtain a permit unless APHIS amends the rule to permit acceptable substitutes for methyl bromide. I further understand that you may be reviewing a proposed amendment to allow alternatives to methyl bromide. This pulp and paper facility, which provides 850 jobs, is in desperate need of wood chips to continue its operation

and it has available a supply of chips from South America, but methyl bromide cannot be effectively or safely applied to wood chips. I am told, however, the alternative chemical can be used.

** The Substitute material's test results were done under the direction of the U.S. Forest Service in Madison, Wisconsin.

Question. Can you give me a detailed status report on the proposed APHIS amendment? Do you plan to propose such an amendment and, if so, could you share with the Committee the approximate time frame?

Answer. The proposed Animal and Plant Health Inspection Service (APHIS) amendment is considering a combination fungicide insecticide spray for wood chips of Pinus radiata from Chile. APHIS has completed the pest-risk assessment and found exotic pine plantations in Chile are host to a greatly reduced number of serious insect and pathogen pests compared to natural conifer stands in other regions of the world. The proposed APHIS amendment would allow the importation of Pinus radiata wood chips that are derived from logs from live, healthy trees which are apparently free from plant pests, plant pest damage, and decay; and the logs have been debarked before chipping. In addition, the logs will be treated with a fungicide and an insecticide registered for use by the Environmental Protection Agency for application to wood products. At the present time, we are in the process of performing an economic analysis.

APHIS has started the rule-making process to allow wood chips of Pinus radiata from Chile to be treated with a combination fungicide insecticide spray in lieu of methyl bromide for entry into the United States. Precise predictions in rule making are not possible and the time necessary will depend upon interest expressed during the comment period. It would not be uncommon for this to take approximately 2 years.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

HORSE PROTECTION

In last year's Agricultural Appropriations bill the Committee concurred with the House in its expectation that USDA would work with horse industry organizations to improve the enforcement of the Horse Protection Act by enhancing the regulatory responsibilities of the USDA-certified organizations. The Committee expected APHIS to provide a report to the Committee regarding its progress in achieving this objective and any associated savings to APHIS by February 1, 1996.

Mr. Secretary, to date I am not aware that such a report has been provided to the Committee.

Question. Would you please check into this and report back in a timely fashion?

Answer. In late 1995, APHIS officials discussed with representatives from certified horse industry organizations several ways to improve the Horse Protection Act enforcement. Since then, APHIS officials have maintained continual dialogue with industry on this issue. APHIS is moving toward finalizing specific ways industry can assume more regulatory responsibilities. We will provide the Committee with a complete report outlining our findings and

recommendations as soon as it has been reviewed by the Administration.

ANIMAL WELFARE

Mr. Secretary, in the just concluded farm bill, Title IX-Miscellaneous, Subtitle A - Authorizes the Secretary to issue guidelines for the regulation of persons regularly engaged in the commercial transportation of equine for slaughter.

There are only eight equine slaughter facilities presently operating in the U.S. For this reason, many horses are transported for long periods, often in overcrowded conditions and often in vehicles that have inadequate headroom. Some of the horses being transported are in poor physical condition or have serious injuries, which can be severely aggravated by the journey.

Question. Mr. Secretary, would you please have the appropriate staff review this provision and provide the Committee the necessary personnel and financial needs to implement and carry out this provision?

Answer. APHIS established a working group to develop options to identify personnel and financial resources needed for implementation. We will inform the committee of the group's findings as soon as they are available.

Question. Mr. Secretary, is it possible that you could make a determination that guidelines are appropriate and start the process for issuing regulations without an appropriation?

I would like your cooperation and assistance in getting this provision implemented as soon as possible.

Answer. We could make a determination that the guidelines are appropriate and develop a system to ensure these guidelines are being followed. It would, however, be difficult to enforce this regulation without additional funding to support inspection personnel and related costs.

1996 OLYMPICS

Question. What safeguards will USDA implement to insure the safety of the American horse population? How will these safeguards be carried out and enforced?

Answer. USDA will ensure that the equine piroplasmosis (EP) positive horses are identified before import. After their arrival and initial quarantine, they will be transported under seal to the Georgia International Horse Park, which is the only site where the horses are authorized to stay. The horses will be housed in an approved, tick-free environment, and will be checked regularly for ticks. The stable and exercise area will be fenced to prevent the entry or exit of unauthorized people or horses. This fenced-in area will be supervised 24 hours a day by USDA and Georgia Department of Agriculture (GDA) personnel. After the Olympics, the horses will be transported under seal to the airport where they will be returned to their countries of origin. In addition, tick surveillance is being conducted before, during, and after the Games. Also, several pesticide treatments will be carried out on the grounds to decrease the number of ticks within the Georgia International Horse Park. Fencing and rodent control programs are being used to prevent tick populations from being re-established.

The EP positive horses will be kept under USDA and GDA supervision 24 hours a day while they are in the United States. If the competitors do not comply with the regulations for having these horses in the country, USDA is authorized to remove the horses from the country. The event organizers will have charter planes available on short notice if a horse needs to be removed from the country.

The December 13 letter outlining the 20 conditions for the waiver allowing EP positive horses into the U.S. Olympic Games indicates clearly that neither USDA nor the Georgia Department of Agriculture will be responsible for the additional costs the waiver will incur. It is my understanding that the Atlanta Committee on Olympic Games (ALOG) has agreed to finance the waiver.

Question. Has the final budget been agreed to? Has any money been put forward so far to finance the conditions of the waiver?

Answer. An initial deposit of \$50,000 was requested by GDA and was paid by the ACOG. The ACOG is responsible for financing waiver activities in their entirety, and they have agreed to pay up to \$1 million. GDA has estimated that it will cost \$600,000.

The ACOG is requiring that the National Equestrian Federation be charged \$3,000 per positive horse imported to help defray their expenses. In addition, they are trying to secure sponsorship for some of the additional costs associated with importing these horses.

It is my understanding that one of the provisions of the "20 point plan" is to quarantine the horses in an isolation area at the Georgia Horse Park where the barns would include everything (stalls, wash rack, and farrier and vet facilities). Movement from the quarantined area would allowed only for warm-up before the competition.

Question. What has been completed on this area so far? Have plans even been approved?

Answer. Plans and descriptions were to have been submitted to the GDA by April 8, 1996, for the screened pole barn that ACOG is having constructed. However, GDA has not received any responses yet. The construction site has been selected, the exercise ring has been completed, and the area will be fenced by April 20, 1996, to allow pesticide treatments to begin.

Another condition of the waiver is that the Federation Equestre Internationale (FEI) would act immediately upon any serious violations of the quarantine.

Question. Has such a compliance and enforcement agreement been developed between the FEI, the ACOG, the USDA, and the Georgia Department of Agriculture? Could you share it with us?

Answer. The FEI (International Equestrian Federation) has established penalties for riders if they violate competition and other rules. They are intending to apply the same penalties for violations of piroplasmosis quarantine restrictions. In addition, there will be a committee comprised of representatives from the four organizations that will advise the commissioner of agriculture for GDA penalties to be assessed. It is not mutually exclusive for FEI and GDA/USDA to both issue a penalty. If necessary, GDA has the authority to have the horse removed from the State, and USDA can have the horse removed from the country.

The allowance of this waiver has caused serious concerns among the horse industry and many Members of Congress. We hear a lot about the fact that precedent has been set in the past when waivers were granted, particularly in the 1984 Olympic Games in Los Angeles.

Question. Is there science available that identifies the risk to our domestic equine population when EP positive horses are allowed to enter the U.S. for competition purposes?

Answer. APHIS conducted a risk assessment to quantify the risk associated with importing EP positive horses. The major concern is that EP would become established in the domestic tick population. The infected ticks would then transmit the disease to domestic horses. The assessment showed that the risk of having EP established in the domestic tick population increases as the number of positive horses increases, the length of their stay in this country increases, and as their exposure to ticks increases. Horses imported for a short time and kept in areas where their access to ticks can be controlled pose a minimal risk to our domestic horse population.

Question. In general, what research is being conducted by USDA on horse diseases?

Answer. APHIS is funding research on equine infectious anemia (EIA) and EP. Research on EIA diagnostic testing is being conducted by the University of Kentucky through a cooperative agreement with APHIS. APHIS is also providing funds to the Agricultural Research Service for new diagnostic testing for EP.

Question. If, whether unlikely or not, the disease should become established in the U.S. as a result of these horses having entered, does the Department have any contingency plans for eradicating the disease?

Answer. To minimize the danger of a foreign animal disease gaining a foothold or spreading throughout the United States, APHIS has developed two emergency animal disease eradication task forces called "Regional Emergency Animal Disease Eradication Organizations" (READEO's). In the event that EP was established in Georgia, USDA could activate one or more READEO's to participate in the eradication process. READEO's exemplify the concept that preselected, pretrained animal health specialists can eradicate a disease more rapidly and efficiently than groups of untrained personnel pulled together at the time an animal disease emergency is recognized. In the absence of a declared national emergency, selected READEO units are activated for test exercises once each fiscal year to help maintain proficiency in disease eradication.

Question. If it were to be necessary, how would the Department pay for eradication of EP should it become established?

Answer. To pay for eradication, contingency funds could be used to fund surveillance, testing, and treatment.

Question. Does the Department have a cost estimate for possible eradication of the disease?

Answer. No. However, due to extensive pre-event and post-event surveillance, we anticipate that any potential problems would be found and corrected before the establishment of the disease in the domestic tick population.

Question. Will there be a follow-up report on how the situation was handled for the 1996 Olympics?

Answer. The GDA will prepare their own report after the Games. Also, USDA and GDA will present a joint report at the United States Animal Health Association Meeting in October 1996.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

BOLL WEEVIL

Farmers across the Cotton Belt have long requested from this subcommittee substantial increases in the boll weevil eradication program. Farmers in some parts of the nation have already benefited from a successful conclusion of this program, but farmers in my state and neighboring states have yet to proceed with eradication.

Last year, there were substantial cotton losses in Texas and other southern states attributable to an infestation of the Tobacco Budworm, the Beet Armyworm, and other pests. There has been suggestions that the boll weevil eradication program activities may have played a role in this disaster.

Question. Can you respond to these suggestions and give us an update on the program and its effectiveness?

Answer. The 1995 cotton crop was a disappointment to growers across the country, with average yields dropping 24 percent compared to the record yields of 1994. Every key cotton pest occurred in greater numbers and required more effort to control than in past years. These pest problems occurred throughout the Cotton Belt--inside and outside areas involved in Boll Weevil Eradication. One of the hardest hit areas happened to be the Lower Rio Grande Valley of Texas, which had just started its eradication program. Suggestions that the program caused the 1995 disaster are inaccurate. Although program activities may have influenced the situation, a variety of factors, such as weather (drought, hail, flood, tornadoes), pesticide resistance, and grower-applied controls, combined to cause the unusually high pest numbers.

In spite of these setbacks, the program is expanding into 1.3 million acres in 2 new zones in Texas. Nationwide, the boll weevil has been eradicated from over 3.5 million acres of cotton. For the first time in over 40 years, cotton has moved ahead of peanuts as the most important cash crop in Georgia. Acreage is expanding significantly in weevil-free areas, creating jobs and stimulating agri-business and rural economies in general. Growers are enjoying at least a 12 to 1 return on their investment in eradication, and they finally have the opportunity to practice biologically-based integrated pest management. Their pesticide use has been reduced from 40 to 90 percent, benefitting rural and urban environments. Eradication is very effective--but it cannot be accomplished in only one season.

NONLETHAL CONTROL METHODS

In the past appropriations bills, the Animal Damage Control programs have been given the direction to pursue non-lethal control activities where appropriate. I understand the inherent conflict of livestock producers who feel their livelihoods threatened by

predators and wildlife preservation groups who would prefer restoration of predator populations.

Question. Can you provide information relating to how you have been responding to this conflict and to what extent you have been successful in implementing non-lethal control methods?

Answer. APHIS has placed considerable emphasis on the development of nonlethal control methods during the past few years. During FY 1995, APHIS personnel were successful in moving or dispersing approximately 21 million animals through the use of nonlethal methods. Currently, 75 percent of the Animal Damage Control (ADC) Denver Wildlife Research Center's budget is allocated towards nonlethal methods development. New nonlethal methods recently implemented by ADC program include:

- the electronic guard, a siren and strobe frightening device to scare coyotes away from sheep.
- the use of methyl anthranilate, a chemical repellent to repel birds from turf areas or standing water.
- the use of the chemical immobilizing agent alpha-chloralose to capture waterfowl in urban areas, and
- the establishment of an operational cattail management program in the Dakotas to reduce blackbird roosting and nesting habitat to deter blackbird damage to sunflower crops.

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

BLACKBIRD RESEARCH

Since 1978 research on management problems associated with extensive blackbird damage to rice crops has been conducted in Louisiana and has been supported in part with Federal funds. Last year, this project was expanded from concentration in two to six additional parishes.

Question. What is the status of this research? What level of funding is needed in FY 1997 to adequately fund the additional research sites?

Answer. Research continues on DRC-1339 staging area baiting methodology for blackbird population management. This includes the evaluation of a new bait formulation and gathering data to support label use changes in the National Section 3 DRC-1339 registration. Repellents such as methyl anthranilate, lime, and fipronil have been evaluated for efficacy as seed treatments for sprouting rice with marginal success. Studies have been initiated to determine movement and distribution patterns of rice depredating blackbirds in Louisiana.

Expansion of the treatment area from two parishes to eight parishes was done with the help of Louisiana State University (LSU), the Louisiana Department of Agriculture and Forestry (LDAF), and the rice farmers. Where blackbird roosts were accessible, depredating blackbird numbers were reduced along with a corresponding reduction of damage. However, surveys of damage reduction have not yet quantified the benefits of the 1996 project.

Regarding the operational pilot blackbird program in Louisiana, if LDAF, LSU, and the rice farmers continue to match the Animal and Plant Health Inspection Service (APHIS) resources, Federal funding would not have to be increased above the present level. However, continuation of the operational project in eight parishes without cooperator matches, would require an additional \$120,000.

Q. 10. NUTRIA CONTROL

Nutria, introduced into coastal Louisiana and elsewhere along the Gulf Coast from South America, are one of the major documented threats to the health of the wetland areas. Marshes throughout the fragile coastline areas suffer from "eat out": the nutria literally eat the grasses to the ground, leaving nothing to hold fragile flotant together, which then breaks up leaving open water in the place of marshy areas and allows saltwater intrusion into these areas.

Question. Are any efforts being taken to control nutria damage to the coastal areas of the Gulf of Mexico?

Answer. APHIS is not currently involved in operational control of nutria to protect coastal wetlands. However, APHIS personnel routinely provide assistance in response to requests to control nutria which cause damage to lawns, gardens, small lakes, and drainage canals. APHIS also has representatives on various nutria "task forces" and provides input into research projects investigating nutria problems in coastal marshes. For example, APHIS has worked with the National Biological Service and the Louisiana Department of Wildlife and Fisheries on nutria-related projects.

AGRICULTURAL MARKETING SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

URBAN FARMERS' MARKETS

Question. The testimony submitted for today's hearing indicates that AMS currently is conducting research to determine the feasibility of using central-city historic structures to market more fresh agricultural products to the urban poor as part of its efforts through the Wholesale Market Development program to foster the growth of urban farmers' markets. What does such a study entail and how will AMS utilize the research findings?

Answer. AMS believes that public markets, in conjunction with seasonal farmers' markets, can be advantageous for inner-city locations, with benefits to consumers through greater choice and availability of fresh food and more competitive pricing, and to small and medium-sized producers through better access to sizeable markets.

We have found increasing interest among various marketing, agricultural, and public-interest groups to incorporate public and farmers' markets into plans for historic preservation and urban renewal. Such markets are also a land use consistent with traditions and heritage of historic districts in many cities.

AMS facilitates the development and renovation of urban retail markets by providing funding for the initial feasibility study and design phase of the projects. AMS supports studies of farmers' and public markets in metropolitan areas of various sizes to reflect the diversity of marketing strategies employed at each location. The collective results of these studies allow us to develop a knowledge base and market models. The farmer and public market models developed can then be applied to markets in other urban areas across the United States to improve the access of consumers to fresh, high quality foods. Actual construction of these markets is funded through private contributions or by state and local governments.

Question. Are you also looking at how urban farmer markets might better serve WIC program participants?

Answer. The establishment of local farmers' markets supports the Women and Infant Children, or WIC, Farmers' Market Nutrition program by providing consumers with greater access to fresh agricultural produce. The increased availability of nutritious, high quality produce stimulates consumption in these urban areas. Consumer participation in Departmental nutrition programs is further facilitated by the acceptance of food stamps by many permanent vendors at existing markets.

Question. What is the cost of this study?

Answer. AMS receives appropriated funding to pursue wholesale market development activities and uses a portion of these funds to support the development of urban retail markets. AMS provides funding and technical expertise to various public and private entities involved in performing the data collection and analysis for the studies. The actual cost of each research project varies according to the complexity of the project and the market's location. In the past three years, AMS has been involved in the development of public markets in Columbus, Ohio; Toledo, Ohio; and Asheville, North Carolina, and has initiated three additional projects for fiscal year 1996 in Philadelphia, Pennsylvania; Camden, New Jersey; and Sea Island, South Carolina. AMS has received an increasing number of requests from state and local municipalities for assistance in developing retail markets in metropolitan areas. A brief description of the Ohio and North Carolina public market projects and cost estimates for each project follow:

Toledo, OH Farmers' Market Facility. Growing demand and changing market conditions placed heavy pressure on the old farmers' market facilities in Toledo, Ohio. The Toledo Farmers' Market serves as a vital outlet for local fruits, vegetables, greenhouse products, baked goods and other homemade food items in the greater Toledo metropolitan area. Facility and land constraints severely limited the ability of the market to expand and provide needed space and services. A December 1993 AMS report provided recommendations for the improvement and expansion of the existing facility. AMS staff participated in the research study and contributed \$35,000 through a cooperative agreement with the Ohio State University Cooperative Extension Service, the Toledo Department of Natural Resources, and the Toledo Warehouse District Association, a non-profit public group. Owners and managers of the market, along with the City of Toledo, have undertaken an aggressive renovation project designed to improve and increase grower and consumer utilization of this facility. Local officials are raising \$1.7 million to move and re-establish the market.

North Market, Columbus, Ohio. The grand opening ceremony of the North Market in Columbus, Ohio, was held in October 1995. AMS supported the project through a 1993 agreement for \$30,000 to research the viability of replacing an outdated facility with a renovated facility in an adjoining historic structure. The market authority and the City of Columbus issued bonds to cover the renovation costs and used approximately \$4.5 million dollars to fund the project. The new larger market is already oversubscribed, having twenty more applications for space than is available. The vendors at the market include produce sellers, meat and poultry producers and purveyors, four vendors selling natural and organic products, and bakery and processed food businesses. The market also has erected a permanent shed for farmers to sell products during the growing season. The executive

director of the market and the mayor have publicly praised USDA for its role in the early stages of the redevelopment process.

Grove Arcade Public Market Project, Asheville, North Carolina. A cooperative agreement for \$102,000 with the Grove Arcade Public Market Foundation in Asheville, North Carolina, supports a study of development criteria for urban retail centers in small metropolitan areas. Data collection and facility planning are now underway. The Grove Arcade Public Market Foundation has raised \$1.1 million in private funds and has received a commitment for a \$3.2 million grant from the Economic Development Association. Legislation to have the General Services Administration turn over the Grove Arcade historical site, which is valued at \$1.8 million, for redevelopment has been passed. The new market will have room for 70 local businesses when the project is completed, and over 300 have already applied for space. Completion is expected by the end of the year.

NATIONAL ORGANIC PROGRAM

Question. The prepared testimony indicates that the Agricultural Marketing Service is currently evaluating the recommendations of the National Organic Standards Board and developing a proposed rule for publication this year. Do you have a more specific time frame for when that rule will be published?

Answer. We are considering changes based on recommendations and we will publish a proposed rule as soon as it is reviewed and cleared by the administration.

Question. How much is included in the fiscal year 1997 request for this purpose?

Answer. The fiscal year 1997 budget request includes \$514,000 in appropriated funds for the national organic program.

PESTICIDE RECORDKEEPING PROGRAM

Question. The FY 1997 budget requests an increase of \$1.184 million for pesticide recordkeeping. How much has AMS invested in the implementation of this program to date?

Answer. From its inception in fiscal year 1992 through fiscal year 1995, the pesticide recordkeeping program has expended \$5.084 million. The fiscal year 1996 budget for the program remains at the fiscal year 1995 level of \$1.511 million.

Question. What is the importance of this program?

Answer. The pesticide recordkeeping program makes available more accurate data on the use of Federally restricted use pesticides by certified private applicators--who are mainly farmers. The regulations require pesticide application records that are

comparable to the records maintained by commercial applicators in each State, or that meet a uniform national standard. The information is then available for use by any Federal or State agency that deals with pesticide use, health or environmental issues related to the use of pesticides. The information is also available for use in medical treatment for individuals who may be exposed to restricted use pesticides, such as farm workers.

Question. Who are the main users of these records?

Answer. The main users of these records are State pesticide regulatory agencies and the National Agricultural Statistics Service, or NASS. NASS conducts voluntary pesticide use surveys on a variety of agricultural commodities. The survey asks the producers to refer to their pesticide use records when answering the questions. The States have access to the records to support their pesticide program activities.

Question. The prepared testimony indicates that AMS has cooperative agreements with 18 states; that 20 states have their own regulations governing recordkeeping by certified private applicators; and that the remaining states have indicated that they do not intend to enter in agreements with AMS? Why have these states chosen not to participate?

Answer. Since the prepared testimony was provided, AMS has signed an additional cooperative agreement with the State of Missouri, so that AMS now has 19 States in cooperative agreements. In addition, several of the States that originally stated they were not interested in cooperating with AMS have since initiated negotiations with AMS to enter the program through a cooperative agreement.

Other States have indicated an unwillingness to enter into a cooperative program with AMS for various reasons. Some States have expressed concerns that they would need to hire additional staff for the program, and are reluctant to hire without the assurance of long-term funding to support the new positions. In addition, several States are going through reorganization within their agencies and say that until they have completed their reorganization process they are unable to commit to any additional Federal/State program. Other states are concerned about potential adverse reactions from their certified private applicators, mainly farmers, if State inspectors become involved in another regulatory activity, especially a Federal one.

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

QUESTIONS SUBMITTED BY SENATOR COCHRAN

PACKERS AND STOCKYARDS LICENSING FEE PROPOSAL

Question. The fiscal year 1997 budget proposes \$13.5 million in collections from new license fees to cover all of the packers and stockyards activities. An increase of \$3.5 million is requested to cover the capitalization and start-up costs to implement the packers and stockyards license fees.

I assume that this is a legislative proposal which you intend to submit to the appropriate authorizing committees of the Congress for consideration. Is that correct? When will this legislative proposal be submitted?

Answer. Proposed legislation authorizing license fees was submitted to Congress on August 4, 1995, and similar legislation is now pending.

Question. Would you please describe more specifically the \$3.5 million which would be required for capitalization and start-up costs if the proposed license fees are authorized?

Answer. There will be start-up costs associated with implementing the proposed license fees. The principal costs will be the funds needed to maintain ongoing operations during a transition period that will be required to promulgate the necessary implementing regulations and begin collecting the license fees.

Question. I recently received a letter from the President of the Livestock Marketing Association opposing this fee proposal. He asks that the views and comments of the Association on this proposal be made a part of the record of this hearing, and I ask that the letter be inserted in the record at this point.

Two concerns are raised in this letter:

The Association points out that currently, livestock feeders are the largest marketers of slaughter animals in the United States but are not subject to the Packers and Stockyards Act and regulations. As such, imposing a licensing fee on one marketer of livestock and not another would unfairly discriminate against livestock markets and dealers who are subject to the Act and regulations. Would you respond briefly to this concern?

Answer. The license fees would apply to all market agencies and dealers subject to the Packers and Stockyards Act, including those livestock feeders (feedlots) who are operating as market agencies and dealers as defined by the Act.

Question. Also, the question is raised as to what incentives the government would have to control program costs if regulated industries are covering these costs by paying license fees. Would you respond briefly to this concern?

Answer. It is anticipated that the Agency will still be required to submit annual budget requests to Congress to obtain appropriation authority for the total amount to be collected each year. Also, any proposed fee changes will have to be published in the Federal Register for comment prior to implementation.

MEAT CONCENTRATION STUDY

Question: You indicate in your prepared testimony that the study of concentration in the red meat packing industry mandated by the fiscal year 1992 Appropriations Act is complete but leaves unanswered many important questions. As a result, the Secretary has established a 21-member advisory committee on agricultural concentration which will develop recommendations for possible actions to ensure competitive agricultural markets by June 1996. What is the Secretary's advisory committee on agricultural concentration specifically tasked to do? How can it develop recommendations if a long-term study did not provide conclusive data on this issue?

Answer: The advisory committee was specifically asked to:

- a. Review market concentration in the meat packing industry, including red meat and poultry, through analysis of the recent USDA study of concentration in the red meat packing industry and other relevant studies. To the extent dealt with in these studies, such review should consider: (1) the available information on regional procurement markets for slaughter cattle in the continental United States; (2) the effects that slaughter cattle procurement practices and concentration have on the purchasing and pricing of slaughter cattle by beef packers; (3) the use of captive cattle, hog, and poultry supply arrangements by packers and the effects of such arrangements on markets; (4) the economics of vertical integration and of coordination arrangements in the hog, lamb, and poultry slaughtering and processing industries; (5) the available data on pricing and procurement by hog and poultry slaughtering plants; (6) the pertinent research literature on issues relating to the structure and operations of the meat and poultry packing industries; and (7) the information on the availability of rail cars to transport agricultural products, especially livestock and grains, and the effect of competition in the railroad industry on rates for livestock and grain shippers.
- b. Review the application of the Packers and Stockyards Act of 1921, as amended, taking into account its effect on concentration and vertical integration in procurement, pricing, and contractual agreements regarding livestock and poultry.
- c. Review how and whether the information gathering and reporting by Agricultural Marketing Service is affected by industry structure, including concentration, and the effects that may result for markets and producers; whether additional statutory authority to collect data is needed; whether such collection should be mandatory or voluntary and the consequences of each approach; and whether there are other statutory data collection authorities that provide a basis for determinations regarding these issues.
- d. Review available information and assess the extent to which concentration in the railroad industry affects the adequacy and availability of rail car service and the rates and prices paid by producers, grain elevators, shippers, and consumers.
- e. Examine the farm-to-retail price spread fluctuations and trends for livestock and poultry during the period beginning January 1, 1993, and ending December 1, 1995, noting their historical context and relevant market development.

- f. To the extent data is available from existing studies, ascertain whether livestock and poultry concentration is having an effect on consumer prices.
- g. Ascertain whether there is adequate information to identify a relationship between concentration in the livestock and poultry industries and effects on the environment, whether further study is needed on this issue, or if there are actions that can or should be taken on the basis of current information.
- h. Review the information and services provided to the livestock and grain industry sectors by USDA to determine if USDA can or should do more for small producers, packers, processors, shippers, and retailers in order to assist competition in the marketplace.
- i. Review whether USDA lending programs, research projects, and regulatory programs result in or encourage concentration with regard to the livestock and poultry industries.
- j. Review types of contractual agreements between producers and processors to determine if both parties have sufficient market information and market power to enable them to negotiate terms with the other party.

Based on its review of market concentration in the agricultural sector, the Committee shall report its findings and recommendations to the Secretary of Agriculture by June 7, 1996.

Although the concentration study did not determine whether concentration at the national level affected cattle prices, the study provided a wealth of information about the structure of the meatpacking industry, including definitions of relevant cattle and hog markets, the role of captive supplies in beef packing, price determination in cattle and hog procurement, and vertical coordination in hog production. It should also be noted that the study did not include policy recommendations.

Question: What was the actual cost of this study?

Answer: The seven contractors involved in the study were paid \$634,496. In addition, the Agency temporarily redirected existing resources at the expense of other programs to cover costs such as data collection and processing, computer support, and overall management, coordination and review of the various projects. These costs were not specifically tracked for the study.

Question: Two related funding increases are proposed for packers and stockyards programs for FY 1997: (1) \$480,000 to increase investigations of deceptive and fraudulent practices that affect the movement and price of meat animals and their products; and (2) \$550,000 for increased analysis of industry structure and performance to monitor the competitive implications of behavioral practices in the meat packing industry and to support legal actions that require complex economic and statistical analysis.

Will the recommendations of the Secretary's advisory committee expected in June of this year have any bearing on these funding requests?

Answer: This request for additional funds is necessary for the Agency to meet its responsibility of fostering fair and open competition and guarding against deceptive and fraudulent practices which affect the movement and price of meat animals and the products therefrom. The Agency would also be able to address recommendations emanating from the Advisory Committee on Agricultural Concentration, which are expected to be consistent with and lend support to the funding request.

ELECTRONIC FILING

Question. An increase of \$225,000 is requested for fiscal year 1997 to enable GIPSA to establish electronic filing procedures for annual reports. The budget justification indicates this additional funding is necessary to implement the President's instruction that Agencies provide for the electronic filing of reports. Is this a one-time investment? If not, what is the total cost of this initiative?

Answer. The \$225,000 requested for development costs will be a one-time investment. However, there will be some on-going costs to operate and maintain an electronic filing system. About \$20,000 of the requested amount would be used to purchase additional computer hardware and software. The remaining amount is needed for the design, development, and implementation of the necessary programming.

SUBCOMMITTEE RECESS

Senator COCHRAN. Our next hearing is going to be on Tuesday, April 16. We will be meeting in this room, and we will hear from the Department's witnesses on the budget request for food and nutrition programs. Until that time, the subcommittee will stand in recess.

[Whereupon, at 12:11 p.m., Thursday, March 28, the subcommittee was recessed, to reconvene at 10 a.m., Tuesday, April 16.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

TUESDAY, APRIL 16, 1996

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senator Cochran.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF ELLEN HAAS, UNDER SECRETARY, FOOD, NUTRITION,
AND CONSUMER SERVICES**

ACCOMPANIED BY:

**DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND
PROGRAM ANALYSIS**

**MARY ANN KEEFE, DEPUTY UNDER SECRETARY, FOOD, NUTRI-
TION, AND CONSUMER SERVICES**

FOOD AND CONSUMER SERVICE

STATEMENT OF WILLIAM LUDWIG, ADMINISTRATOR

ACCOMPANIED BY GEORGE BRALEY, ASSOCIATE ADMINISTRATOR

CENTER FOR NUTRITION POLICY AND PROMOTION

STATEMENT OF EILEEN KENNEDY, DIRECTOR

OPENING REMARKS

Senator COCHRAN. The subcommittee will come to order. Today, we continue our hearings on the fiscal year 1997 budget submitted by the President for Agriculture, Rural Development, and Related Agencies' activities.

This morning, we review the budget request for programs and activities of the Department of Agriculture's Food and Consumer Service. We appreciate very much the attendance of all of our witnesses.

This morning, our panel is lead by the Under Secretary for Food, Nutrition, and Consumer Services, Ellen Haas. I will ask you to introduce those you wish to present to the subcommittee.

We know that William Ludwig, who is the Administrator of the Food and Consumer Service is here, and George Braley, Eileen Kennedy, and Dennis Kaplan.

We also note that the total appropriations request for programs and activities under the Food and Consumer Service, for the next year is \$43 billion. This is approximately 75 percent of the total budget authority proposed for all USDA programs and activities which fall under the jurisdiction of this subcommittee.

Therefore, the importance of these activities, from a budget standpoint, cannot be overemphasized. It is also the reason why we are having this hearing very early in the sequence of the hearings that we have planned for this year.

The request submitted by the administration is \$3.3 billion above the fiscal year 1996 appropriations level for these programs. We have copies of written statements, for which we thank you. We will make those a part of the record in full.

We would invite you to summarize or make any comments on the issues raised in the statements, or make any other statements that you would like to the committee. We will then be able to discuss the statements and issues, and ask questions of the panel.

Let me invite Ms. Haas to proceed, in any way you desire.

Thank you for being here.

STATEMENT OF ELLEN HAAS

Ms. HAAS. Thank you very much, Mr. Chairman. I would like to say it is a pleasure, as always, to come back to the committee.

And as you say, it is very important to come back with our request at this time, for the President's 1997 budget proposal for USDA's food and nutrition programs.

I would like to introduce those who are seated at the panel. I think you touched on all, except our new Deputy Under Secretary, who is Mary Ann Keefe.

I have joining me as well, Bill Ludwig, who is the Administrator of the Food and Consumer Service; Eileen Kennedy, who is the Executive Director of the Center for Nutrition Policy and Promotion; George Braley; and also Dennis Kaplan, from the Office of Budget and Program Analysis of USDA.

As Under Secretary of Agriculture for Food, Nutrition, and Consumer Services, as you have said, I am responsible for the 16 Federal nutrition programs, including the anchor programs of food stamps, child nutrition, and WIC, and these are critically important to the health and well-being of so many millions of Americans.

These programs provide the link between America's agricultural abundance and the health and well-being of its citizens. They touch the lives of one in five Americans, and nearly 90 percent of all benefits go to families with children.

By getting food to people who need it, these nutrition programs prevent hunger and improve the health of the Nation. And they have been strikingly successful. But we must build on these accomplishments and strengthen our national nutrition safety net.

1997 FCS GOALS

We have three major goals for the programs in 1997, that they will fulfill the historic nutrition mission, that they will work better, and that they will work more cost effectively.

Our 1997 budget request, totaling \$43 billion, is a broad and comprehensive vision for the future, to meet these three goals.

The Food Stamp Program is the cornerstone of our fight against hunger and malnutrition. For 30 years, we have seen a steady nationwide decline in malnutrition. The program will serve an average of 26.1 million people monthly during fiscal year 1996.

FOOD STAMP BUDGET

Our request of almost \$30 billion will allow us to meet the needs of our customers and improve the quality of service.

The Food Stamp Program is effective, because at its basic core, it expands, as needed, during economic recessions, and it retracts when the economy improves, as we are seeing today. The latest statistics show that the economy has improved and Food Stamp Program participation has declined steadily.

The numbers released just this month show that we have had a cumulative savings of over \$1 billion, as a result, over this past year.

The administration is also committed to real food stamp reform. Last year, we proposed legislation to return the program to its nutrition roots, to ensure that benefits are issued and used properly, and to give States more flexibility in operating the program.

Many important program reforms are also underway. Under the Vice President's leadership, we have worked closely with States to accelerate the implementation of EBT. It can reduce costs, provide security and dignity for clients, and help to fight fraud.

Today, all but two States are planning or developing EBT. Thirteen already have operating systems. Today, we are reaching 15 percent of all food stamp households with EBT. By the end of 1997, our goal is for all States to have begun implementation of EBT.

Another key administration priority that I feel very strongly about is the fight against food stamp fraud and abuse.

FOOD STAMP FRAUD AND ABUSE

Our message is simple: We will not tolerate food stamp fraud and abuse, and we have backed our commitment with action. Last March, we presented to Congress, a comprehensive 13-point legislative proposal to fight fraud at its source, by tightening retailer requirements, strengthening monitoring efforts, and imposing stiffer penalties on violators.

Most of these provisions have already been adopted and passed by the House and Senate.

Also, we are using retailer sweeps across the Nation to eliminate ineligible stores from the program. Thus far, we have removed 1,400 stores. Ten to fifteen percent are under investigation for possible fraud.

We are also committed to reducing food stamp issuance errors. In November 1994, we committed to bring down the error rates by 1 full percentage point, which is about 10 percent of overall errors, by the end of 1995.

Our preliminary data shows us that we can fully expect to meet this commitment. That results in a cumulative taxpayer's savings of \$200 million. We plan to continue this effort.

Just last Friday, I joined Secretary Glickman in New York City support food stamp offices, where they have dramatically reduced their error rates, and we recognized the work that they are doing

out there in the field, to do that. Also, we plan to continue this effort and make further reductions in the future.

CHILD NUTRITION BUDGET

For child nutrition programs, we are requesting \$8.7 billion. These programs, including the National School Lunch Program and School Breakfast Program, play an essential role in promoting children's health.

The administration has been committed from the start to real program changes to reflect today's knowledge of the link between diet and health, and I must say, we greatly appreciate the tremendous support the committee has given us, of this historic effort, the School Meals Initiative for Healthy Children.

SCHOOL MEALS INITIATIVE

I am pleased to report today that we are making real progress in turning this new policy into better school meals and better children's diet. We are using the support you provided to, in turn, support local schools and families, and local communities, in implementation.

Our request for the child nutrition programs will maintain the amazing momentum for these important changes, and ensure that we can continue to promote children's health and well-being.

As you know, the School Meals Initiative for Healthy Children is the first full-scale reform since the program began 50 years ago. It is a comprehensive integrated plan to ensure healthful school meals nationwide.

It begins by updating, for the first time, also, in 50 years, our school meals nutrition standards, so that they meet our current nutrition science in the dietary guidelines for Americans.

But it does more than that. It cuts redtape and improves the nutrition profile of commodities. It also recognizes that we cannot ensure children's health and education through policy changes alone. Children need the skills and motivation to make food choices for a healthy diet.

TEAM NUTRITION

That is the role of Team Nutrition, USDA's network of public and private partnerships to support the implementation of the historic School Meals Initiative for Healthy Children.

Team Nutrition includes an integrated nutrition education program, designed to reach children where they are, with targeted reinforcing messages, based on proven science-based research, to encourage children to improve their diets and their health.

But what is so important about Team Nutrition is the way it is supporting schools across the country as well.

We are supporting schools in many ways. We are supporting them with training and technical assistance that helps food service staff prepare meals that are healthful, and that children will eat, if they are tasty.

Team Nutrition's success rests on a strong network of partnerships. We have hundreds of national and local partners, in thousands and thousands of communities across the country. And Team

Nutrition is not just USDA. It cuts across Government agency lines.

Our Federal partners include the Department of Health and Human Services, the Department of Education, the Department of Defense, and in the Department of Agriculture, USDA's Extension Service, as well as the other agencies working on commodities, like Agricultural Marketing Service.

To date, there are over 200 Team Nutrition supporters, organizations multiplied by thousands of local representatives, organizations that range from the American Academy of Pediatrics and American Heart Association, to the Wholesale Grocers of the United States.

Team Nutrition strategic partnerships have already contributed millions of dollars in top-quality nutrition education. Their support leverages scarce Federal resources for maximum health impact.

NUTRITION EDUCATION MATERIALS

We have developed, in cooperation with Scholastic, a set of in-school nutrition education materials that actively engage children, so that they can learn.

These teacher resource kits, developed for ages kindergarten through grade five, reinforce other lessons students are learning in the classroom, and most importantly, link the lunchroom to the classroom.

They also include take-home materials that encourage active learning at home with families.

COMMUNITY ACTION KIT

We are also working with the Extension Service to develop and distribute a community action kit later this spring, in every county in America. And we are reaching millions of children every single day, during primetime TV watching hours, with public service announcements featuring characters from Disney's hit movie, "The Lion King."

As you know, one in two children in America have seen "The Lion King," and so when these PSA's have been appearing free to the Federal Government, on the Disney Channel, on syndicated Disney afternoons, through 160 affiliates across the country, and on selected home videos, delivering messages that motivate children to improve their diet, we know we are reaching, daily, up to 20 million children.

We take the messages even further with educational posters in cafeterias, table tents, and other materials. Partnerships like this permit Team Nutrition to reach millions of children, through multiple reinforcing channels. It is a great investment for taxpayers, with a huge payoff for children.

Key elements of the training include a toolkit for healthy meals, where we sent new recipes to more than 94,000 schools, and State training grants awarded to 26 States, to build a statewide training effort to train trainers across the country.

Additional grants will be awarded this year to maintain momentum, and we will implement a print and electronic food service resource system in cooperation with the Food Service Management Institute in Mississippi.

Team Nutrition schools around the country are the community focal point, because that is where change has to occur. These schools are bringing together local stakeholders to make changes to promote the health of children.

TEAM NUTRITION SCHOOLS

Nationwide, we have more than 9,000 Team Nutrition schools in every State, and they have already joined forces to help children and their families make food choices for a healthy diet. We soon anticipate tens of thousands of Team Nutrition schools.

Fiscal year 1997 is a critical year for Team Nutrition. Our \$18.5 million request will build the momentum for successful implementation of this new policy. It is a policy that is so important to reach the 45 million children in 94,000 schools.

WIC BUDGET

The President's 1997 budget requests \$3.88 billion in fiscal year 1997, in order to reach 7.5 million women, infants, and children, by the end of 1997, achieving what I believe is a very critical bipartisan policy objective of full participation in the WIC program.

The evidence has long been clear that WIC improves the health of participants, including fewer premature births, lower incidents of low birth weight, fewer infant deaths, and a greater likelihood of receiving prenatal care.

It is also highly cost effective. Women in WIC, during their pregnancies, have lower Medicaid costs for themselves and their babies than do women who do not. WIC literally saves money, and it saves lives.

Our most important achievement in WIC, for 1997, will be to reach full participation. We know it is also critical to manage the program growth effectively. In recent years, we have experienced increases in recoveries from States, and, therefore, we are requesting a proportionately lower increase in budget authority, as a result.

However, additional management strategies to meet the challenge of full participation are necessary.

WIC CONTINGENCY FUND

Our proposed WIC contingency fund will provide us the necessary flexibility to meet the needs of eligible applicants, while tailoring appropriation as close as possible to expected needs.

Our commodity distribution and food donation programs are also critically important, and we have requested \$172 million for them, and \$215 million for the food donation programs. They are critical supports in our national nutrition safety net, and they often reach those people who are hardest to reach with the food they need, like the homeless.

We streamlined these programs and have given States more flexibility. Last year, the committee supported our efforts by combining the appropriation for TEFAP and the Soup Kitchen/Food Bank Programs, permitting States to allocate commodities between these programs, based on their needs.

We are also working to transfer administrative responsibilities for the Nutrition Program for the Elderly, to the Administration on Aging, in order to streamline that program.

CENTER FOR NUTRITION POLICY AND PROMOTION

And finally, there is the Center on Nutrition Policy and Promotion, where our request includes \$4.5 million. The Center has already had a significant impact on nutrition policy, since it was established, just 15 months ago. It was instrumental in the release of the "1995 Dietary Guidelines for Americans."

In 1995, the Center also launched the Healthy Eating Index, a most valuable new measure of how well Americans are eating. This tool can be updated each year, to see the comparative advances we are making, or the problems we need to address.

And last December, USDA tapped the Center as the lead agency to draft the U.S. plan of action for the International Conference on Nutrition.

One of the Center's top priorities for fiscal year 1997 is nutrition education for the American public. We are committed to moving beyond simple information delivery, to more innovative and effective nutrition promotions, that are always science-based and consumer-oriented, and most importantly, that work.

In conclusion, Mr. Chairman, our 1997 fiscal year request of \$43 billion for food, nutrition, and consumer services, represents our commitment to make the programs work better, to make them more cost effective, and to improve the health of the Nation's low-income families, elderly, and children.

The Clinton administration has brought about real significant change. I know that you and the members of this subcommittee share a commitment to this new direction, which has improved the programs and improved the Nation's health. Our partnership has yielded real concrete improvements, of which we can all be proud. I look forward to working together with you, so that we can reach our shared goals, and meet our national health and nutrition responsibilities as effectively as possible. I look forward to your questions.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Ms. Haas. We have your complete statement, and it will be made part of the record along with the statements of Mr. Ludwig and Dr. Kennedy.

[The statements follow:]

PREPARED STATEMENT OF ELLEN HAAS

Mr. Chairman, Members of the Subcommittee, thank you for the opportunity to present the President's fiscal year 1997 Budget Proposal for USDA's Food and Nutrition Programs. As Under Secretary of Agriculture for Food, Nutrition and Consumer Services, I am responsible for the Federal nutrition programs, including the anchor programs of Food Stamps, Child Nutrition, and WIC, as well as the Center for Nutrition Policy and Promotion. These programs provide the link between America's agricultural abundance and the health and well-being of its citizens. Collectively, our programs touch the lives of one in five Americans, especially children—nearly 90 percent of all benefits go to families with children.

The mission of these programs is to improve the nutrition and health of children and low-income families by getting food to people who need it. These programs have been strikingly successful in meeting this mission. Since the nationwide expansion

of the Food Stamp Program and the introduction of WIC, the gap between the diets of low-income and other American households has narrowed. Data from the National Nutrition Monitoring System show that growth stunting among children has decreased by nearly 65 percent; the prevalence of low birth-weight babies has dropped dramatically; and iron-deficiency anemia in low-income preschoolers has decreased significantly.

This Administration has been committed to making these programs do an even better job in meeting this mission; not only to strengthen the national nutrition safety net, but to improve the health status of children and low-income families through real, meaningful program reform. Our fiscal year 1997 Budget request for nutrition programs, totaling \$43 billion, reflects these goals.

FOOD STAMP PROGRAM

The Food Stamp Program is the Nation's cornerstone of our fight against hunger and malnutrition. Today, it serves about 26 million people. The \$30.0 billion we have requested for fiscal year 1997 will allow us to continue our effort to reform the program to better meet its statutory nutrition and health mission, and to make sure that taxpayers get maximum value for the significant investment we make in the program.

The Food Stamp Program is designed to be responsive to changes in the economy; it expands as needed during economic recession and retracts when the economy improves. The latest statistics show that as the economy has improved, Food Stamp Program participation has declined significantly—by more than one million participants since this time last year. The numbers released in March show a cumulative savings of over \$1 billion as a result.

This Administration is committed to real reform in the Food Stamp Program. Legislation we proposed last year for inclusion in the 1995 Farm Bill would return the program to its nutrition roots so that it better serves American children and families, ensure that benefits are issued and used properly, and afford States more flexibility in operating the program. These proposals are basic, common-sense reforms that build on the program's success. The plan is founded on six principles for change—to provide for nutrition security, improve program integrity, modernize benefit delivery, expand State flexibility, ensure economic responsiveness, and promote personal responsibility. Our request supports the President's balanced budget proposal by contributing to deficit reduction.

While the proposal described above reflects our vision for reforming the Food Stamp Program to meet the nutrition needs of the next century, many important program changes are already well underway. For example, under the Vice President's leadership, the Administration has been working closely with States to accelerate implementation of electronic benefit transfer (EBT), a cost-effective, user-friendly, uniform benefit delivery system. Today, all but two State agencies are at least engaged in planning for implementation of EBT; 13 have systems in operation. These systems provide nearly 4 million participants—in 15 percent of all Food Stamp households—with increased dignity, and convenience in using their benefits. It also provides an audit trail to help us identify the few stores and recipients that abuse the program. This is already a real success story; our fiscal year 1997 request will maintain the momentum for EBT implementation.

Another key Administration priority is the fight against program fraud and abuse. Since I joined the Administration in 1993, our message has been simple: we will not tolerate Food Stamp fraud and abuse. We all agree that public perceptions of fraud and abuse represent serious threats to the program. This Administration has taken decisive action. Recognizing that the best way to fight trafficking and other fraud is to eliminate it at the source, we presented a comprehensive 13-point legislative proposal last March to eliminate trafficking and other fraud through a three-tiered attack, involving:

- screening of food retailers entering the program to ensure that only legitimate stores participate;
- monitoring of food retailers to identify promptly anyone defrauding the program, and immediately suspend them; and
- stiffer penalties for violators, including debarment and forfeiture of property gained through Food Stamp fraud.

Most of our reform package has been included in Congressional welfare reform legislation. In the meantime, we have committed significant administrative resources to prevent and reduce Food Stamp fraud. FCS, in cooperation with USDA's Inspector General's Office, has engaged in a series of retailer "sweeps" that has helped us in removing a significant number of ineligible stores from the program.

Our request includes \$4.2 million to support increased retailer visits, both before and after authorization, to ensure that only legitimate stores participate.

Those profiting from trafficking and other fraud steal more than money; they undermine more than public trust. They steal food from children and needy families. Promoting Food Stamp Program integrity is a central part of our National health responsibility, and our responsibility to taxpayers.

Another important priority is the effort to reduce Food Stamp issuance errors. In November, 1994, we made a commitment to bring down the Quality Control error rates by one full percentage point—or about 10 percent of overall errors—by the end of fiscal year 1995. I can tell you today, based on preliminary information, that we fully expect to meet this commitment. This cumulative reduction in error translates into over \$200 million in taxpayer savings. We have worked closely with States using a variety of strategies to improve the accuracy of their certifications. We plan to continue these successful strategies, and encourage further improvement.

CHILD NUTRITION PROGRAMS

We are requesting \$8.7 billion for the Child Nutrition Programs. For a half century, these programs, including the National School Lunch and School Breakfast Programs, have played an essential role in promoting the long-term health of America's children. This Administration has been committed from the beginning to updating this program to reflect our current knowledge about the link between diet and health. We have greatly appreciated the Committee's support in this historic effort through providing funds for the School Meals Initiative for Healthy Children. I am pleased to report today that we are making real progress in turning this new policy into better school meals and better children's diets. We are using the resources you provided to support schools, families, and communities in implementing updated school meals nutrition standards. Our request for the Child Nutrition Programs will help us maintain the momentum for these important program improvements, and ensure that we can continue to promote children's health and nutritional well-being.

In June, 1995, the Administration published the School Meals Initiative for Healthy Children final rule, a comprehensive, integrated plan to continuously improve school meals and promote the health of the 45 million children in the 94,000 schools nationwide. This first full-scale reform of the program in 50 years, updates the nutrition standards of school meals to meet the Dietary Guidelines. Congress validated our plan by incorporating the Dietary Guidelines into the Child Nutrition reauthorization legislation in 1994.

Under the new rule, school meals will comply with the Dietary Guidelines for Americans, and fat and saturated fat levels will be lowered. Administrative red-tape will be cut, so schools can focus on serving healthy meals, instead of paperwork. And specifications have been changed to improve the nutritional quality of 21 USDA commodities provided to local school districts, as well as improving their availability.

But while the new policy updates nutrition standards to promote children's health, this Administration recognizes that we cannot bring about long-term behavior changes through policy changes alone. Children must be educated and motivated to make food choices for a healthful diet. That is why Team Nutrition, a network of public and private partnerships to support implementation of the School Meals Initiative for Healthy Children, is essential to meeting our National health responsibility. It has a key role to play in our effort to reducing the \$250 billion in health care costs and lost productivity that result from diet-related health problems.

Funded since fiscal year 1995, Team Nutrition successfully promotes food choices for a healthful diet through the media, schools, families, and the community. It has two main components: nutrition education and training and technical assistance. Team Nutrition's multi-faceted educational program is delivered in schools, through the media, at home, and in the community to motivate and empower children to make food choices for a healthy diet. Its training and technical assistance component supports school food service professionals with new tools and information to help them prepare healthful meals that children will enjoy. To implement these initiatives, Team Nutrition leverages a small investment of public resources through a wide array of public-private partnerships to extend its reach and effectiveness.

Some key elements of the nutrition education program include:

- Team Nutrition Schools around the country are the community focal point for Team Nutrition, bringing together parents, children, educators, school food service professionals, community health and agriculture leaders to make changes that promote the health of children. Nationwide, over 7,000 Team Nutrition Schools in all 50 states have already actively joined forces to help children and

families make food choices for a healthy diet. We soon anticipate tens of thousands of Team Nutrition Schools.

- We have developed, in cooperation with Scholastic, Inc., a set of in-school educational materials based upon the Dietary Guidelines. The modules are designed to make choosing a healthy diet an exciting, interactive, enjoyable experience for children. They reinforce other lessons they are learning in the classroom, and link the lunchroom to the classroom with activities that promote menu planning and interaction with food service staff. Each of the first 10,000 Team Nutrition Schools will receive classroom kits for Pre-Kindergarten and Kindergarten, Grades 1–2, or Grades 3–5, and resource kits with materials to be reproduced for dissemination to students and their families. Other classroom teachers will be able to purchase the kits, and the materials will also be made available through Scholastic, and on the World Wide Web.
- We are working with USDA's Cooperative State Research, Education, and Extension Service (CSREES) to develop and distribute a Community Action Kit through home economists in nearly 3,200 counties, 4-H clubs, electronic bulletin boards, and other communications technologies. This collaborative effort will help communities already engaged in activities with the Extension Service across the Nation to benefit from Team Nutrition's educational resources.
- Our collaboration with the Walt Disney Company to develop and disseminate nutrition education materials is a great example of how Team Nutrition partnerships can leverage scarce Federal resources for maximum impact. Materials have been designed, developed, produced and disseminated featuring characters from *The Lion King* to reach Pre-Kindergarten through 5th grade children. While USDA provided a small amount to cover technical costs, Disney has provided costly media time, and the cost for the use of trademark symbols and logos, worth many millions of dollars, for free. A series of public service announcements are being broadcast daily, during prime children-watching hours, on the Disney Channel, and on syndicated Disney Afternoon programs through 160 affiliated stations across the nation, delivering messages designed and tested to motivate children to improve their diets. And since one in two American children have seen *The Lion King*, these messages reach children in ways they can relate to. We have also developed and widely distributed colorful posters, table tents, and other materials for classroom, cafeteria, community and at home use. Disney's characters and materials are also being used in the Scholastic curricula, and in materials being prepared with other partners, such as the National PTA.

Partnerships like this permit Team Nutrition to reach millions of kids through multiple, reinforcing channels, in ways they can accept and understand. It is a great investment for taxpayers—with a potentially huge payoff for children.

- We are providing electronic access to materials and information through the Team Nutrition Home Page and the Team Nutrition Schools Home Page. These are designed to provide access through the World Wide Web and FedWorld to provide the ability to obtain nutrition education information and materials and to provide schools with the ability to communicate with each other and share nutrition activity ideas and successes.

Some key elements of Team Nutrition's training and technical assistance component include:

- Food service training and technical assistance materials designed to assist school food service personnel in building knowledge and skills necessary to implement the Dietary Guidelines. A "Tool Kit for Healthy School Meals," including a variety of new recipes which are lower in fat and sodium, is being provided to 94,000 schools. Training materials for implementing new nutrient-based or food-based menu planning systems, food safety and sanitation materials, a resource packet to help in the use of volunteer chefs, and food preparation videos, are also being prepared and used.
- State training grants designed to empower State and local agency food service professionals to implement the Dietary Guidelines in schools, awarded to 26 States to build a Statewide training effort for local food service staff. Additional grants will be awarded this year to continue our momentum in implementing updated nutrition standards.
- Regional training workshops, conducted by FCS, to assist States in training local school food authorities and local food service staff in healthful food production and menu planning options.
- A print and electronic food service resource system to support food service staff by providing nationwide access to training materials and a nutrient database and software to assist schools that choose Nutrient Standard Menu planning.

Mr. Chairman, fiscal year 1997 is a critical year for Team Nutrition. While our efforts since Team Nutrition was launched last year have focused on establishing the program and expanding it to reach schools across the country, we expect tens of thousands of schools will join the program in fiscal year 1997. The \$18.5 million we are requesting for Team Nutrition is critical to maintaining the momentum of successful implementation of our new policy in schools and communities across the Nation.

Program Integrity

Strengthening program integrity is another crucial part of our efforts to improve the Child Nutrition Programs. We have a major on-going program to eliminate anti-competitive bid-rigging. FCS is aggressively pursuing suspension and debarment actions wherever suitable cause exists: we have identified 213 individuals and corporations subject to suspension and debarment determinations; actions have been completed in 170 cases.

In the Child and Adult Care Food Program (CACFP), we have established a federal/state work group to improve program integrity. We are determined that funds destined for children and impaired adults in day care will be used for their intended purpose. They will not be siphoned into fraudulent activities.

SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS AND CHILDREN (WIC)

The President's fiscal year 1997 Budget requests \$3.88 billion in fiscal year 1997 in order to reach 7.5 million women, infants, and children by the end of fiscal year 1997, achieving a bipartisan policy objective of full participation in the WIC Program.

WIC's mission is to improve the health of low-income pregnant and postpartum women, and infants and children up to five years old—and it is meeting that mission. The evidence is clear that WIC's three components—a nutritious food package, nutrition education, and a gateway to pre-natal and pediatric health care—result in real improvements in the health of participants, including fewer premature births, a lower incidence of low birthweight, fewer infant deaths, and a greater likelihood of receiving prenatal care.

WIC is also highly cost-effective. Women who participate in WIC during their pregnancies have lower Medicaid costs for themselves and their babies than do women who do not participate. And because the program requires States to negotiate rebate programs with infant formula manufacturers to participate in the program, we are maximizing the effectiveness of WIC benefits in reaching mothers and children who need them. Through WIC, we are literally saving money and lives. We are strengthening their families, and improving their future.

Our most important achievement in WIC for fiscal year 1997 will be to reach full participation—a success story that we are proud to report. We know that it is critical to manage program growth effectively. In recent years, we have experienced increases in recoveries from States, and have requested a proportionately lower increase in budget authority as a result. However, additional management strategies to meet the challenge of full participation are necessary. We have proposed the establishment of a WIC contingency fund, which will provide the program the necessary flexibility to meet the needs of eligible applicants, while tailoring appropriations as closely as possible to expected needs.

Beyond this, we hope to find ways to improve program administration while preserving WIC's effectiveness. One important focus is WIC vendor management. We are working with the vendors, participants, State agencies, and program cooperators to find ways to better ensure program integrity, while working to ensure that vendor participation in WIC is as streamlined and efficient as possible.

COMMODITY ASSISTANCE AND FOOD DONATIONS

We have requested \$172 million for the Commodity Assistance Programs, and \$215 million for Food Donations Programs. These programs, while relatively small, are critical supports in our national nutrition safety net. They reach those that are often hardest to reach with the nutritious supplemental foods they need.

We have streamlined the Commodities Programs and given states more flexibility. Last year, this Committee supported our efforts by combining the accounts for TEFAP and the Soup Kitchen/Food Bank Programs. This permitted us to let each State allocate commodities between these programs based on the State's needs, a flexibility that was embraced enthusiastically by State distributing agencies.

We have undertaken several initiatives to improve program management. The Agency is working to give States greater flexibility by modifying and streamlining

the caseload allocation system. The agency also is improving food packages in the Commodity Supplemental Food Program and the Food Distribution Program on Indian Reservations. Further, we are working to increase on-time delivery of orders, and to improve our responsiveness to customer complaints or concerns. All of this will help us serve our clients better.

We are also working to transfer administrative responsibilities for the Nutrition Program for the Elderly to the Administration on Aging. This change, which was recommended as part of the Administration's National Performance Review and is proposed as part of reauthorization legislation for the Older Americans Act, will serve to streamline elderly nutrition service in one unified program at the Department of Health and Human Services. I know that this consolidation is a high priority for the committee.

FOOD PROGRAM ADMINISTRATION

We have requested \$111 million in funding for food program administration this year. The investment in FCS administration, representing less than one-third of one percent of the agency's total budget authority, is important to maintaining the number and quality of management evaluations, site visits, and program accountability activities that safeguard billions of taxpayer dollars. The request includes an increase of \$3 million to maintain and improve FCS automation infrastructure, and modernize the agency's information technology.

CENTER FOR NUTRITION POLICY AND PROMOTION

Our request includes \$4.5 million for the Center for Nutrition Policy and Promotion (CNPP). As the lead Federal agency in human nutrition, USDA is charged with developing national policy and designing and disseminating science-based nutrition promotion programs for all American consumers, including those involved in food assistance programs. Established in 1994, CNPP is USDA's focal point for linking scientific research to the consumer. With its small budget and staff, CNPP has been effective in bringing the latest science into the nutrition policy process.

Although the CNPP was established only 16 months ago, a number of important milestones have already been reached. CNPP was instrumental in the release, in conjunction with the Department of Health and Human Services, of the 1995 Dietary Guidelines for Americans, which form the basis of Federal nutrition policy and programs. In 1995, CNPP launched the Healthy Eating Index (HEI), a valuable new tool that synthesizes current research to provide a measure of how well Americans are eating. And in December of last year, CNPP served as the lead agency at USDA in drafting the International Conference on Nutrition's U.S. Plan of Action for Nutrition. The plan identifies potential problem areas in domestic nutrition, and provides strategies for improvement.

One of CNPP's top priorities for fiscal year 1997 is nutrition education for the American public. CNPP is committed to "reinventing" nutrition education, moving beyond simple "information transfer" to find innovative ways to reach the overall goal of improving the American diet. The request for fiscal year 1997 will support development of nutrition promotions that are innovative, science-based, and consumer-oriented.

THE BALANCED BUDGET PROPOSAL

In support of the President's plan to balance the Federal budget, our budget request identifies over \$20 billion in savings over seven years while maintaining a National nutrition safety net that responds to the changing circumstances of families and children.

Under the President's plan, the Food Stamp Program continues to index benefits to inflation; all energy assistance counts as income; a work requirement makes adults aged 18 to 50 with no dependents ineligible for food stamps after six months of each year unless they work 20 hours a week or participate in workfare or training (although eligibility continues if a State fails to supply a training or workfare slot); and new integrity measures crack down on fraudulent food stamp trafficking and reduce program waste. It better targets food subsidies in family day care homes and makes other minor changes in the Child Nutrition Programs.

CONCLUSION

Mr. Chairman, our fiscal year 1997 request of \$43 billion for Food, Nutrition and Consumer Services represents our commitment—to make the programs work better, to make them more cost-effective, and to improve the health of the nation's low-income families, elderly, and children.

The Clinton Administration has brought about real, significant change. In the Food Stamp Program, we have strengthened the nutrition safety net while increasing flexibility for States and promoting program integrity for taxpayers. In Child Nutrition, we are making historic changes that will ensure that the school meals programs will meet their nutrition mission, and promote the health of 45 million children across the Nation. In WIC, we are fulfilling our bipartisan commitment to full participation. And our efforts reach beyond the anchor programs to include important changes in the commodity programs and, through the Center on Nutrition Policy and Promotion, to the nutrition and health of the American public.

I know that you, and the Members of this Subcommittee, share a commitment to this new direction, which has improved the programs and the Nation's health. Our partnership has yielded real, concrete improvements of which we can all be proud. Working together, we can reach our shared goals, and meet our national health and nutrition responsibilities as effectively as possible.

Mr. Chairman, I would be pleased to answer any questions you may have. Thank you.

PREPARED STATEMENT OF WILLIAM LUDWIG

Mr. Chairman, members of this Subcommittee, thank you for the opportunity to appear before this subcommittee to discuss the fiscal year 1997 budget request proposed for the U.S. Department of Agriculture's nutrition assistance programs.

STREAMLINING ACCOMPLISHMENTS

Before describing the details of our budget request, I would like to spend a moment describing the streamlining efforts at the Food and Consumer Service (FCS). FCS has been a strong supporter of both the National Performance Review (NPR) recommendations in the area of streamlining, and the USDA reorganization effort. We have already met, or reduced below, staff ceiling levels in each of the NPR target categories for fiscal year 1996, as well as the Department's fiscal year 1996 target level for the number of Headquarters staff. We have closed the ten field locations we identified as part of the USDA reorganization. Since 1993, our baseline year, we have eliminated 135 supervisory positions, and have nearly fulfilled our commitment to double our supervisory ratio by fiscal year 1999. All of these streamlining accomplishments have been achieved through careful management of attrition and the availability of early retirement opportunities, and with no negative impact on women, minorities, or persons with disabilities.

BUDGET REQUEST

The Food and Consumer Service requests \$43 billion in new budget authority in fiscal year 1997. This includes contingency reserves of \$2.5 billion for the Food Stamp Program and \$100 million for the Supplemental Nutrition Program for Women, Infants, and Children (WIC). The request reflects an increase of \$3.0 billion over the fiscal year 1996 appropriation level, based on continuation of current law. The President's 1997 request also contains many policy proposals that will achieve significant budget savings.

FOOD STAMP PROGRAM

The Food Stamp Program is the primary source of nutrition assistance for low-income Americans. The mission of this nutrition security program is to assure access to a nutritious, healthful diet for low-income Americans through food assistance and nutrition education, thereby improving the nutritional status of low-income households and strengthening the food and agriculture economy. We are requesting \$29.9 billion for the Food Stamp Program, including a contingency reserve of \$2.5 billion to ensure funding availability to meet any unforeseen economic disturbances, or natural disasters. The amount includes \$1.143 billion for the Program of Nutrition Assistance for Puerto Rico, as well as funds for nutrition assistance for the Northern Marianas. Under the current economic forecast for fiscal year 1997 we project that:

- The average rate of unemployment will be 5.7 percent in 1997;
- Program participation will average 25.9 million persons monthly in 1997; and
- The Thrifty Food Plan and the related maximum benefit will result in an average monthly benefit of \$78.18 per person.

The number of program participants fell throughout fiscal year 1995, one indicator of a strengthening economy. Throughout most of fiscal year 1995, and continuing into the early months of 1996, the number of food stamp recipients was about 1 mil-

lion less each month than it was for the same month the previous year. This steady decline, over the period between August 1994 and December 1995, resulted in the Food Stamp Program spending \$1 billion less than it would have had participation remained level. This trend reflects the Food Stamp Program's ability to respond to changing economic conditions, expanding with rising poverty and unemployment, and shrinking when the economy improves.

The requested benefit reserve assumes new importance in light of current forecasts of continuing caseload reductions. The benefit reserve serves as insurance—protecting the program's ability to get food to people who need it—in the event of unforeseen changes in the economy. Should the 1997 decline in food stamp participation occur more slowly than projected or if the economy does not fare as projected, the benefit reserve provides the mechanism to ensure that benefits will continue to be available for eligible low-income children, elderly, families and individuals.

In addition, the Administration has proposed a number of major reform and anti-fraud initiatives that will improve Food Stamp Program operations. I would like to discuss them briefly.

FOOD STAMP PROGRAM REFORM INITIATIVES

The Food Stamp Program legislative proposals are basic, common sense reforms that build on the program's success and contribute to the goal of a balanced budget. The Food Stamp Program works because of national nutrition, eligibility and benefit standards; a funding structure that ensures the program responds to changing needs caused by economic growth and recession; and Federal oversight to help ensure their integrity. The President's proposals achieve meaningful reform and judicious savings while preserving the basic structure of the program.

Last year, we proposed a responsible alternative for change in the Food Stamp Program. Our proposal was guided by six key reform principles: provide for nutrition security, improve program integrity, modernize benefit delivery, expand State flexibility, ensure economic responsiveness, and promote personal responsibility. The reforms proposed last year would transform the Food Stamp Program into a more flexible program that meets the nutrition needs for families into the next century while preserving the ability of the Food Stamp Program to respond to changing economic conditions.

Under the President's budget, the Food Stamp Program continues to index basic benefits to inflation; all energy assistance counts as income; a work requirement makes adults aged 18 to 50 with no dependents ineligible for food stamps after six months of each year unless they work 20 hours a week or participated in workfare or training (although eligibility continues if a State fails to supply a training or workfare slot); and new integrity measures crack down on fraudulent food stamp trafficking to reduce program waste.

Finally, we sought to toughen the Program's work requirements. Anyone not willing to work should be removed from the Food Stamp Program, and the President's proposal will stiffen sanctions against those who refuse to work and to comply with requirements in other programs. At the same time, those who are willing to work should have the opportunity and the support necessary to put them to work. The President's proposal strikes a sensible balance to ensure that those who are willing to work do not lose essential nutrition benefits because States are unable or unwilling to provide sufficient work and training opportunities.

FOOD STAMP PROGRAM ANTI-FRAUD INITIATIVES

The Administration believes that a renewed and strengthened dedication to combating fraud and abuse should be a major component of reform. Accordingly, USDA submitted proposed legislation that will strengthen the authority and tools to fight program abuse. Our strategy is to prevent fraud by ensuring that only legitimate stores participate in the Food Stamp Program and by strengthening penalties against those entities that violate program rules. Although we are seeking new legislative authority, USDA has also moved forward under existing statutory authority to enhance our ability to eliminate program violators and better enforce fines and penalties.

Fraud and abuse remains a serious problem in the Food Stamp Program. We strongly believe that a comprehensive, integrated administrative and legislative approach is needed to eliminate opportunities for fraud and consequently promote public trust in the program. Our request supports measures that will eliminate retailers who misuse benefits and remove barriers to EBT expansion—both of which will strengthen the link between the Food Stamp Program and a healthful, nutritious diet. The Administration believes that the requested authority and actions currently underway will provide significant obstacles to food stamp fraud.

Our fiscal year 1997 budget includes an increase of \$4.257 million to support a contract with private vendors to increase on-site retailer visits from approximately 20,000 in fiscal year 1996 to over 80,000 in fiscal year 1997. These on-site visits are our first line of attack to help bring trafficking under control and restore confidence in the Government's management of the program. This requested funding will be used to ensure initial and continued store eligibility, to monitor compliance with program rules, and to conduct investigations. FCS will continue to aggressively fight Food Stamp fraud and abuse. Administratively, the Agency will also continue to work with OIG to conduct "sweeps" to identify and eliminate ineligible stores from the program. Over 1400 stores have been removed, including many stores offering little or no food for sale.

ELECTRONIC BENEFITS TRANSFER (EBT)

In fiscal year 1997, the Administration will keep working towards the electronic delivery of Food Stamp Program benefits. Electronic Benefits Transfer systems modernize delivery cost-effectively while improving recipient service, state management, benefit security, financial tracking, and fraud detection. EBT operates like a debit card system for recipients' food accounts.

States have the option to use EBT and 13 States already do. They deliver 15 percent of all Food Stamp Program benefits. Maryland, New Mexico, South Carolina, and Texas have statewide EBT systems. Every other State is planning or implementing EBT. This represents enormous progress in the last two years and shows a growing consensus that EBT works best and costs less. We will eliminate paper coupons eventually along with the stigma of using them and the inefficiencies of processing them. EBT supports the nutritional purpose of our program with a user friendly system that's better for every stakeholder involved. Recipients, states, stores, banks, and the taxpayers all win.

FOOD STAMP TAX OFFSET EXPANSION

We are progressing in our efforts to expand the agency's debt collection efforts. In fiscal year 1991, the Department initiated a test for collecting claims resulting from household error through Federal income tax refund offsets. Between calendar year 1992 and 1995 the number of participating States grew from 2 to 32, and collected a total of \$70 million. In fiscal year 1996, 40 States are participating in the Tax Offset Program. Collections from this program are estimated at \$30 million in fiscal year 1997.

CHILD NUTRITION PROGRAMS

The purpose of the Child Nutrition Programs is to assist State and local governments in providing food services that serve healthful, nutritious meals to children in public and nonprofit private schools, child care institutions, certain adult day care centers, and summer recreation programs. We are requesting a total of \$8.7 billion for the Child Nutrition Programs. This request will provide the funding necessary to support the National School Lunch Program, the School Breakfast Program, Summer Food Service Program, and the Child and Adult Care Food Program. The request includes \$18.1 million for the Special Milk Program. We estimate that in fiscal year 1997 these programs will support:

- 4.4 billion school lunches,
- 1.2 billion school breakfasts,
- 1.7 billion meals in centers and family day care homes,
- 138 million summer food service meals, and
- 155 million half-pints of milk.

FCS will be continuing its efforts to streamline the administration of the Child Nutrition Programs at the State and local levels through promulgation of regulations and policy issuances affecting each of the programs.

The request also reflects the administration's commitment to improving the nutritional status of the nation's children.

SCHOOL MEALS INITIATIVE FOR HEALTHY CHILDREN

The USDA School Meals Initiative for Healthy Children is a comprehensive integrated plan to ensure that children have healthy meals at school. A major part of this plan is the historic update of nutrition standards so that school lunches and breakfasts meet the Dietary Guidelines for Americans. However, just enacting policies will not make this change a reality for every child, and USDA cannot accomplish this historic change in isolation. That is why USDA established Team Nutri-

tion, a Nationwide integrated program designed to support implementation of the School Meals Initiative for Healthy Children.

The mission of Team Nutrition is to improve the health and education of children by creating innovative public and private partnerships that promote food choices for a healthful diet through the media, schools, families, and the community. It supports implementation of updated nutrition standards through two coordinated approaches—Nutrition Education and Training and Technical Assistance.

Nutrition Education is provided through a comprehensive, integrated program designed to build skills and motivate children to make food choices for a healthy diet in accordance with the Dietary Guidelines for Americans. This effort brings proven, focused, science-based nutrition messages to children in a language that they understand while strengthening social support for healthy children's diets among parents, educators, and food service professionals.

Team Nutrition is built around a framework of in-school and public communication efforts, with a focus on local schools and communities to support implementation of updated nutrition standards. Innovative educational resources are developed and distributed through supporter networks and directly by FCS and USDA's Cooperative State Research, Education, and Extension Service and other government agencies such as the Department of Education and the Department of Health and Human Services. Support is brought into focus at the local level through Team Nutrition Schools, which actively engage children and their parents, food service staff, teachers, agricultural organizations, and other leaders in their communities to improve school meals. There are now thousands of Team Nutrition Schools across the country, and the number is growing rapidly.

Training and Technical Assistance is a "change-driven" program providing support to school food service personnel implementing the Dietary Guidelines for Americans. This effort will ensure that school nutrition and food service personnel have the education, motivation, training, and skills necessary to provide healthy meals that appeal to the children served and meet USDA's nutritional requirements. These personnel will also have a clear vision of their role in the school community and as integral team members of comprehensive school health programs.

A Team Nutrition National Training Program has been initiated. Newly developed training materials were pretested in October 1995, in anticipation of eight training workshops to be held nationwide beginning early in 1996. Training will be conducted for Regional office and State Agency staffs who will in turn train local school food authorities in the nutrient-and-food-based menu planning systems.

In fiscal year 1997, FCS requests \$18.5 million for this two-pronged effort. These funds are critical to achieving implementation of the Dietary Guidelines in school meals by the statutory deadline of July 1, 1996. We will use them to support several important activities. Team Nutrition will continue to promote technical and nutritional assistance for food service professionals. We will accentuate the importance of public-private partnerships in order to encourage the Federal dollars available for this endeavor. The number of Team Nutrition schools will continue to grow as they engage children and their families, teachers, food service staff, agricultural organizations and other community leaders to improve school meals.

CHILD NUTRITION LEGISLATIVE PROPOSALS

We continually strive to improve our programs. The President's 1997 Budget contains proposals to accomplish this as well as achieve savings. In fiscal year 1997, we propose legislation that would:

- Target reimbursement rates in the Child and Adult Care Food Program to homes serving children with the most economic need. Currently reimbursement rates do not vary based on need. Under the proposal, meals which are (1) served by a Family Day Care Home provider residing in a low-income area; (2) served by a low-income provider; or (3) served to low income children would continue to be reimbursed at current rates. Payments to all others would be reduced.
- Round down reimbursement rates for cash and commodity assistance to the nearest cent provided to Child Nutrition programs. Currently, reimbursement rates are rounded to the nearest quarter of a cent.
- Require that a minimum of 8 percent of the assistance provided through the National School Lunch Program be in the form of commodity assistance. Current law requires that 12 percent of such assistance be provided in commodities.
- Eliminate startup and expansion grants in the SBP and SFSP.

CHILD NUTRITION INTEGRITY

In keeping with the Department's commitment to make our programs work more effectively, FCS aggressively pursues suspension and debarment actions whenever

suitable cause exists. To that end, FCS has formed a task force dedicated to this effort and joined forces with the Department of Justice and the Defense Logistics Agency to identify appropriate offenders. At the time of our budget request, FCS had identified 213 individuals and corporations subject to suspension and debarment determinations; actions had been initiated against 170. Final administrative action had been taken in 101 cases with 69 entities debarred for 3 years from involvement on a nonprocurement basis with all Federal Programs. Compliance agreements aimed at protecting the Federal interest had been signed or were under discussion for 23 other corporations. FCS will continue to pursue appropriate debarment action as deemed necessary.

SUPPLEMENTAL NUTRITIONAL PROGRAM FOR WOMEN, INFANTS AND CHILDREN (WIC)

The purpose of the WIC Program is to improve the health of nutritionally at risk, low-income pregnant, breastfeeding and postpartum women, infants and children up to their fifth birthday. The fiscal year 1997 request continues our strong commitment to WIC. The requested funding of \$3.780 billion will allow continued growth to a final year-end level of 7.5 million participants, approximately 200,000 more participants above the projected fiscal year 1996 year end level. This request supports the President's goal of providing service to all eligible persons who seek to participate. In addition, we have requested a \$100 million contingency reserve for WIC, to be used if unforeseen increases in food prices jeopardize maintenance of current participation levels. The President's request of a \$50 million increase over fiscal year 1996, is relatively modest given the expected increase in participation. This amount will be used in conjunction with funds carried forward from fiscal year 1996 to reach the estimated participation.

During fiscal year 1995, the program continued to provide service to low-income women, infants and children at nutritional risk. Average participation in WIC for fiscal year 1995 was 6.9 million persons per month. For fiscal years 1996 and 1997, average participation is estimated at 7.2 and 7.4 million persons per month, respectively.

A major reason for WIC's success has been access to health care as well as an emphasis on nutrition education and provision of educational materials. Emphasis is placed on the dangers of substance abuse including smoking during pregnancy, as well as the benefits of breastfeeding. Equally important is WIC's role as a gateway to other related health and social services, such as prenatal care, well-child care, Medicaid, and immunization programs. Studies published by USDA and other groups have found that participation in WIC is highly cost effective and results in improved birth outcomes and reduced health care costs. During the past six years, participation in this program has increased by over 40 percent. Over this time the largest increases were in children's participation.

WIC COST CONTAINMENT INITIATIVES

All WIC State agencies and most Indian Tribal agencies have implemented some measure of cost containment activities in order to use their food grants more effectively. The use of infant formula rebates continues to be the most successful cost containment method. This subcommittee's support for WIC appropriations is evident from the program's growth. However, we cannot ignore contributions from successful cost containment efforts. This activity will help USDA to reduce formula cost by over \$1 billion in fiscal year 1996 which in turn allows the program to reach 1.7 million more participants each month.

Based on the authority provided in last year's appropriations act, we plan to transfer \$36 million to the Rural Utilities Assistance Program this year. We have taken into account the level of unspent funds estimated to be available in fiscal year 1997 when formulating this budget. It is important to note that our fiscal year 1997 request draws both on new appropriations and estimated carryover available in fiscal year 1997 in order to reach the President's goal of full participation.

FOOD DONATIONS PROGRAMS FOR SELECTED GROUPS

Our request for \$215 million for this account would continue to support food assistance for the Food Distribution Program on Indian Reservations (FDPIR) and the Nutrition Program for the Elderly (NPE). This request reflects the amount necessary to administer projected participation in FDPIR and fund NPE. We are requesting language that will immediately transfer NPE funds to DHHS. This consolidation of funding will improve the efficiency of program management, particularly at the State level, while maintaining the nutritional focus of the funds provided. Funds requested for FDPIR will support expected participation of 117,200 monthly—the same level projected for fiscal year 1996.

COMMODITY ASSISTANCE PROGRAMS

The Commodity Assistance Program combines funding for the Commodity Supplemental Food Program (CSFP), The Emergency Food Assistance Program (TEFAP) and the Soup Kitchens/Food Banks Program (SK/FB). Combining these programs reflects changes resulting from fiscal year 1996 appropriations action and will continue to allow States to shift funds between TEFAP and Soup Kitchens as they choose. The requested amount of \$172 million provides:

- \$76 million in support of 164,000 women, infants, and children and 214,000 elderly in CSFP. We estimate that \$16 million will also be available from fiscal year 1996 for this purpose.
- \$96 million for TEFAP, and Soup Kitchens and Food Banks and will continue to allow States the flexibility to shift funds between accounts as they choose. This is a \$16 million increase over fiscal year 1996.

RESEARCH AND EVALUATION

FCS is requesting \$20.183 million in the Food Stamp, WIC, and Child Nutrition appropriations for research studies and surveys to support a variety of policy initiatives and to respond to the oversight responsibilities of Congress.

The purpose of the studies and surveys is to provide descriptive and evaluative information about the programs in order to make informed decisions and improve program operations. An important part of this research agenda supports our ongoing evaluations of the effectiveness of Team Nutrition, the implementation arm of the School Meals Initiative for Healthy Children. In addition, these research activities are instrumental in measuring the effectiveness of program operations and alternatives and providing objective and reliable outcome measures of program performance required by the Government Performance and Results Act.

In the coming year, we expect to address five broad themes with the funds requested for program research: integrating nutrition into the Food Stamp Program, nutrition outcomes in child nutrition and WIC program, nutrition security, enhancing program integrity and management, and modernizing benefit delivery systems.

FOOD PROGRAM ADMINISTRATION

Funding for Food Program Administration is requested in the amount of \$111 million. This funding is critical to the Agency's ability to maintain efficient and effective program operations. The Agency continues to be fully committed to the National Performance Review and the Department's streamlining efforts. I believe this commitment is apparent in the accomplishments I cited at the beginning of my statement.

FCS administrative costs represent less than one third of one percent of the total FCS requested budget authority. This request is necessary to maintain the number and quality of management evaluations, site visits, and error reduction, program accountability and monitoring activities that are critical to safeguarding billions of Federal dollars. To that end, the FPA request includes an increase of \$1.5 million for pay costs.

We are also requesting an increase of \$3 million to protect FCS automation infrastructure investments and to renovate or to modernize Agency information technology.

We need a sound capital investment strategy to improve productivity, which is critical in offsetting staff reductions resulting from our demonstrated commitment to streamlining.

Due to changes in computer technology, many FCS computers have become antiquated and cannot support current software. All of the Agency's standard microcomputer software packages are seriously outdated. Most are no longer even supported by the manufacturers.

Our capital investment plan is crucial for the Agency to successfully modernize its technology infrastructure. FCS simply cannot withstand a loss in productivity or program and data integrity due to continuing degradation of its technology infrastructure.

CONCLUSION

Since its inception in 1969, the goal of FCS has been to provide food and nutrition assistance for the nation's children and low-income families. We are committed to achieving this goal as efficiently and effectively as possible. We believe that our request of \$43 billion and each proposal contained therein is crucial to continued efficient program operations.

Mr. Chairman, this summarizes the fiscal year 1997 FCS budget request. I will be happy to answer any questions that you may have.

PREPARED STATEMENT OF DR. EILEEN KENNEDY

Mr. Chairman, Senator Bumpers, and Members of the Subcommittee, thank you for the opportunity to present information on the Center for Nutrition Policy and Promotion and its budget for the coming year. I am Dr. Eileen Kennedy, Executive Director of the USDA Center for Nutrition Policy and Promotion (CNPP).

As the lead Federal agency in human nutrition, USDA is charged with developing national nutrition policy and designing and disseminating science-based, nutrition promotion programs for all American consumers, including those involved in food assistance programs. Within USDA the Center for Nutrition Policy and Promotion serves as the focal point linking scientific research to the consumer.

In December 1994, the Secretary of Agriculture reorganized the Department and instituted the position of Under Secretary for Food, Nutrition and Consumer Services. In doing so, the Secretary restructured the position to reflect the importance of nutrition and realigned existing positions and funds to create the Center for Nutrition Policy and Promotion.

The mission of the Center for Nutrition Policy and Promotion is to improve the nutritional status of Americans by serving as the focal point with USDA for linking scientific research to the consumer.

Simply stated, the Center is committed to improving the American diet, not just developing dietary information. The reason—over 50 percent of all deaths each year in this country are related to diet and lack of physical activity. Diet-related health conditions in the United States cost an estimated \$250 billion annually in medical expenses and lost productivity. Four of the 10 leading causes of death in the United States are diet-related—heart disease, cancer, stroke and diabetes.

The need for accurate dietary guidance has wide bipartisan support. Today more than ever, Mr. Chairman, the American consumer is bombarded with conflicting nutrition and dietary messages. Indeed, the public is overwhelmed and bewildered with a steady barrage of nutrition information—some based on solid science, some on questionable science and some completely unrelated to science. It becomes difficult for the public to separate the wheat from the chaff—the good from the bad.

And at the same time, Mr. Chairman, I'm sure that it comes as no surprise to you that there is a widening chasm between consumer behavior—what people actually eat—and what nutrition experts agree constitutes a healthy diet. Public health depends on clear, concise, no nonsense information upon which people can rely. The Center for Nutrition Policy and Promotion is that focal point within USDA that coordinates and develops nutritional messages which are based on the best scientific evidence as compiled and synthesized by some of the Nation's leading nutrition experts.

Although the Center was established only 15 months ago, a number of important milestones have already been reached. On January 2, 1996 the Center released the 1995 Dietary Guidelines for Americans. The Center was instrumental in the coordination and development of the Congressionally mandated Guidelines which form the basis for Federal nutrition policy and programs. The 1995 Guidelines build on previous editions of the Guidelines focusing on ways to improve one's overall diet. The basic message that underpins the Guidelines is that a healthy diet begins with eating a variety of foods from each of the five major food groups. For the first time, the 1995 Guidelines emphasize physical activity along with a healthy diet and recommend that adults maintain their weight in a healthy range and caution against crash weight-loss diets.

In July 1995, another major accomplishment of the Center was the release of the Healthy Eating Index (HEI), a measure of overall diet quality. The Index was hailed by the American Dietetic Association as the "most accurate measurement to date of how Americans eat." The HEI differs from other indices by measuring food intake and providing a single summary measure of diet quality. The HEI has several potential uses which include monitoring changes in food consumption patterns, assessing the healthfulness of overall diets, and serving as a useful tool in developing nutrition education and promotion initiatives. The HEI is a clear example where survey research from USDA is presented in a way to better serve the consumer. For example, HEI scores taken from 1989 and 1990 data shows that the average score for the American consumer was 63.8 and 63.9 out of a possible perfect score of 100. One-third or less of the people surveyed consumed the suggested number of servings from the 5 major food groups. People were most likely to underconsume fruit, vegetables and grains. Further, variety in the diet was limited and consumption of total

fat and saturated fat were above recommended levels for more than 80 percent of the individuals studied.

In December 1995, the Center announced in the Federal Register that the U.S. Plan of Action for Nutrition was available for public comment. As a follow-up to the International Conference on Nutrition, the staff of the Center served as the USDA lead in drafting the Plan. Information was provided by USDA, the Department of Health and Human Services (DHHS), the Agency for International Development (AID), the Environmental Protection Agency (EPA), and the public. The draft Plan of Action identifies gaps in domestic nutrition both at the Federal and national levels and provides strategies to rectify problem areas which will be presented in the World Declaration and Plan of Action for Nutrition. In recognition of the United States' leadership in nutrition programs around the world, AID prepared an International Section. The public comment period closed at the end of January and comments are currently being reviewed.

These are only three of the most notable accomplishments of the Center during its first calendar year of operation. During the same time, the Center staff revamped its quarterly journal, the Family Economics and Nutrition Review, produced the annual report of the cost of raising a child, worked on the revision of the Thrifty Food Plan, developed a monthly seminar series where nutrition information was presented by nationally recognized experts for the benefit of policy makers, legislative staff, and others in the field. All of this was done with a relatively small but highly qualified staff of 35 persons.

In order to continue to maintain and strengthen dietary guidance and nutrition promotion, the Center requests a budget of \$4.5 million for fiscal year 1997 to promote improved eating by all Americans. This will fund the core components in the fight against diet-related illnesses and death.

More specifically, funds will be used to: (1) Advance food and nutrition guidance based on the 1995 Dietary Guidelines for Americans through development of the next generation of food guidance systems; (2) Improve measurement of the cost-effectiveness of nutrition interventions; and (3) Support the personnel and administrative costs of the Center.

With the release of the 1995 Dietary Guidelines and given the current state of nutrition among the public, there is a demonstrated need for nutrition promotion programs and materials. As it currently exists, the Dietary Guidelines booklet is insufficient to effectively motivate and change consumer behavior. We know from extensive research that basic knowledge of dietary guidance is not enough to motivate consumers to change unhealthy behavior. It is critical that consumers have the knowledge of how to incorporate dietary guidance into their everyday lives. To improve the nation's nutritional health, effective nutrition promotion programs must be developed and implemented.

The Center has taken the first preliminary step toward developing food guidance materials from the Dietary Guidelines that targets messages to different audiences. One of the most important target audiences are children 2 years old and above and their parents and care givers. Dietary guidance materials developed by the Center will be incorporated into Team Nutrition initiatives targeted at school age children. This fiscal year 1997 request will support the necessary research and analysis toward reaching these goals. Next year's funding will support the development of nutrition promotional programs based on the Guidelines that are innovative, science-based, and consumer-oriented.

One of the most visible and recognizable examples of effective nutrition promotion materials is the Food Guide Pyramid, a derivative of the food guidance system and the Dietary Guidelines. Since its introduction in 1992, this graphic symbol has come to be widely recognized and accepted by the public. Today, research shows that the Food Guide Pyramid is recognized by 30 percent of all adults. Not only does the Pyramid appear in government publications and professional journals, it is seen on a growing number of food products in grocery stores across America. Fiscal year 1997 funds for nutrition promotion will be used to develop broad-based nutrition promotion programs and materials directed at improving children's dietary habits. While these nutrition promotional materials will be integrated and coordinated with Team Nutrition initiatives, these promotional materials will be designed to serve a broad audience in addition to school age children which include children 2 years of age to pre-kindergarten.

Following the release of the HEI, there has been considerable interest on the part of nutrition and health professionals to expand the use of the HEI for dietary assessment purposes. To that end, it is the intent of the Center to develop computer software, such as a CD-ROM program that complements existing commercially available software, which readily computes the HEI from an individual's dietary intake data. This will not only help nutrition and health professionals but American

consumers assess and improve their diets. The Center has embarked on developing a "consumer friendly" version of the HEI. This will allow consumers to self-evaluate their overall diets. The funding request for fiscal year 1997 will support the development and ultimate release of the consumer version of the HEI along with allowing the continued monitoring of the American diet.

Mr. Chairman, I appreciate this opportunity to address your Subcommittee and to give a brief overview of the Center for Nutrition Policy and Promotion and some of the challenges which face us in the coming year. We would be pleased to answer any questions the Subcommittee may have. Thank you for your attention.

FOOD STAMP FRAUD

Senator COCHRAN. Ms. Haas, I commend you for your excellent statement and the overview of the programs under your jurisdiction.

First of all, let me say that I am impressed with the efforts and the motivation to do something new and energizing, to help improve our food programs under your leadership.

Ms. HAAS. Thank you.

Senator COCHRAN. I think your work has been very impressive. In connection with the Food Stamp Program, and I can say from my personal observations in my State that I sense a new commitment to try to identify and do something about food stamp fraud at the merchant and food store level.

I think the fact that you are trying to target the limited resources we have to those more heinous and expensive criminal activities is commendable.

I know for a long time it was hard to get local law enforcement agencies interested in doing much about food stamp fraud. Everybody knew it was there, everybody hears about it, but it seemed to be a lot more exciting to go after drug rings and other more attractive targets of law enforcement agencies.

But for whatever reason, I have to give credit where it has to be due, that is, to the leadership at the highest level of law enforcement agencies, both at the Federal and State levels. There seems to be a new commitment to do a more effective job about food stamp fraud.

So I think that the guidelines, the suggestions that have been made over time by members of Congress, through committee activities and amendments to legislation, have focused the attention to where it should be focused in this area.

SCHOOL MEALS INITIATIVE

I also think the school lunch and breakfast program initiatives are on target, in that they, for the first time, seem to be bringing everybody together, to unite us all, in an effort to upgrade the quality of the lunches and breakfast meals that are being served, to try to get managers more actively involved in understanding the nutrition needs, and their connection with the overall health of our country, and what we are doing to make available, nutritious and attractive meals for children in the lunch and breakfast programs.

I wonder to what extent do you find a receptive attitude out there in the States, among the administrators of the State programs.

I ask this, because I just recently had an opportunity to meet with the American School Food Service Association, and spoke to

their annual gathering here in Washington, and I got the impression that they seem to want more flexibility in the way they meet these dietary guidelines.

I know the guidelines are now a matter of law, as they were included in the 1994 authorization for the program. But to what extent are you seeking to work with associations like this, to meet the concerns that I detected, that are very real and very serious, on this subject.

NUTRITION STANDARDS

Ms. HAAS. Well, I appreciate your comments, and I think when you make historic changes, as we are doing for updating the nutrition standards for the first time in 50 years, you are going to see some anxiety about that change.

Therefore, we came up with an approach, with the committee's support, to provide the kind of support for implementation and support for flexibility. We did it through training and technical assistance, as well as the integrated nutrition education.

I have met with the State child nutrition directors earlier this year and I have had conference calls with each of the State directors.

Now that we have had training all across the country, in every region, training of trainers, and as we have begun to provide the technical assistance material, they can see that flexibility is also one of our priorities. In fact, it was one of the guiding principles when we first adopted the program of school meals initiative for healthy children. We have made it clear that flexibility is found in the three different meal planning patterns that can be used, including the opportunity to use the current meal pattern, if they use the assisted new menus.

So as we provide the assistance, they are understanding the tremendous flexibility that exists.

SCHOOL MEALS INITIATIVE PARTNERS

Also, we are finding that, in the past, as you say, the School Lunch Program may have been isolated in the education community. What we have today is tremendous support for these changes by the superintendents of schools, by the principals. We have a partnership in these changes with the education community, the food service community, the agriculture community, and the health community.

I think that we will allay many of the concerns that some people might have, because they may not have been aware of the tremendous support and the tremendous flexibility available under the new policy.

As we have moved across the country, we have seen increasing confidence in this program. So much so, that we have over 9,000 team nutrition schools, where the commitment to meet the dietary guidelines is their priority.

Senator COCHRAN. I noticed on page 7 of your statement, you talk about training grants that are being made available to States—

Ms. HAAS. Correct.

Senator COCHRAN. For the purpose of, I suppose, implementing the dietary guidelines and managing the school programs.

Could you tell us, if you have this information available, how much money has been made available under this training grant program and to which States—I do not want you to recite them but 26 States, I think you mention—

Ms. HAAS. Right.

NUTRITION EDUCATION TRAINING GRANTS

Senator COCHRAN. You do not have to give us the whole list, but for the record, would you submit that—

Ms. HAAS. I would be happy to.

Senator COCHRAN. And give us how much money has been given to each State—

Ms. HAAS. I could tell you—

Senator COCHRAN. And could you tell us how you—

Ms. HAAS. I do remember that off the top of my—

Senator COCHRAN. Selected the States, and why you selected those 26, and not the other 24?

Ms. HAAS. I would be happy to. First of all, we provided \$3.4 million in training grants, and it was a very extensive process, that I would be happy to submit in writing.

[The information follows:]

TEAM NUTRITION (TN) TRAINING GRANTS

State agencies that administer the National School Lunch Program within each State were eligible to apply for TN Training Grants. States could apply individually or as a coalition of up to 3 States. Out of the 31 TN Training Grant applications received by USDA, 19 Grants were funded representing 26 State agencies. The Grant period began July 1, 1995; all funds must be obligated by September 30, 1996 and activities completed by December 31, 1996.

Three panels composed of FCS staff convened to determine the technical merit of each application and provide a numeric score and explanatory comments. All grant applications were reviewed competitively and scored against the following evaluation criteria: soundness of project design; organizational experience and management/staff capability; budget appropriateness, efficiency and cost-effectiveness; sustainability; transferability; integration; and presentation. Only the best grant applications with clearly defined goals and objectives consistent with USDA's School Meals Initiative for Healthy Children, involving new or innovative approaches to training, and designed to strengthen the within-State infrastructure to deliver training and technical assistance to school districts were funded.

Below is the list of State agencies that have received Team Nutrition (TN) Training Grants.

<i>States</i>	<i>Funded</i>
Arkansas	\$185,875
Georgia	199,000
Idaho, Alaska, Nevada	399,930
Illinois	199,984
Kansas	160,307
Louisiana, Oklahoma, Texas	400,000
Maine	66,774
Minnesota	199,868
Mississippi, Florida, Kentucky	400,000
Missouri	107,240
Montana, Wyoming	291,916
Nebraska	57,100
New Hampshire	80,000
New Mexico	199,542
North Dakota	49,378
Rhode Island	66,330
Utah	156,708

States	Funded
Vermont	61,417
West Virginia	94,713
Total	3,376,082

Senator COCHRAN. I do not want it to be real extensive, or I will never get around to reading it.

Ms. HAAS. I will make sure that they summarize it.

Senator COCHRAN. Short and sweet. Yes.

Ms. HAAS. Short and sweet.

Senator COCHRAN. Yes.

Ms. HAAS. It was a competitive process, and proposals were examined. We will provide that for you in writing.

Senator COCHRAN. Well, \$3.4 million does not sound like a whole lot, does it, out of an \$8.7 billion budget? How are they going to do much with—

Ms. HAAS. Well, that is only one part of it. I think what is just as important is that USDA provided training; train the trainer efforts. These have been just concluded in every region in the country, and these have never, ever been conducted before, not of this magnitude, nor has the USDA ever provided grants, training grants. So this kind of support is also historic.

What we are doing, by having the training the trainer grants, is extending our reach. I think more than 380 people have been trained. They are going to go back to their States, the five or six from each State who attend this training, and train others.

So instead of spending all the money in one place, what we have done is have an integrated, comprehensive approach that works, and we leverage the small government investment, to get it to spread out across the country.

We recognize that what we are dealing with is reaching 94,000 schools, but I think that the comprehensive approach that we have taken, that includes training, done by USDA as well as State training grants is very effective. We have also set up a help line, with the Food Service Management Institute in Mississippi.

That is a 1-800 number and a computer system which people can access to get technical assistance. All of this combines to make people understand how they are being supported in this implementation, and we are finding that there is tremendous enthusiasm out there for this multifaceted approach.

FOOD SERVICE MANAGEMENT INSTITUTE

Senator COCHRAN. You mentioned in your statement, and then just again, the National Food Service Management Institute at the University of Mississippi.

In what way did you say you had utilized the resources of that institute, and have you also utilized the research arm of the institute that is located at the University of Southern Mississippi?

Ms. HAAS. We have an ongoing cooperative relationship that has been tremendously constructive and helpful. They have provided assistance in planning the training. They have done food purchase guides. We entered into a cooperative agreement with them so that they could prepare food purchase guides, which are very important.

If we are going to move, which we are, because of the law and the regulation, from less than 1 percent of the schools meeting the

dietary guidelines, to 100 percent, we know that the kind of food that you purchase is critically important.

The Food Service Management Institute has assisted us in providing the research and the development of these food purchase guides. These are very important, and they are going to be tremendously important to the local level, to help them purchase lower-fat foods that contribute to the health of children.

These are all examples, the healthy meals resource line which I mentioned and the help center, of the tremendous contribution that the Food Service Management Institute has made.

RESERVE FUNDS

Senator COCHRAN. For both the Food Stamp and WIC Programs, I notice a substantial request included in the budget for reserve funds.

In the Food Stamp Program, for example, the request includes a contingency reserve increase, from \$500 million to \$2.5 billion.

I understand the need for the reserve to keep you, I guess, from having to come to Congress for a supplemental in case of an emergency or some kind of national catastrophe. I understand that, but why the big increase, from the \$500 million to \$2.5 billion?

Ms. HAAS. Well, I would look at it in a different way, Mr. Chairman. That last year was a reduction in the amount of reserve that we had. I think a reserve is there for a very important reason.

ECONOMY

Oftentimes, agriculture supplies and food prices are very volatile. So is the economy. We have been experiencing a downturn in unemployment, we have been experiencing, therefore, a downturn in the participation of food stamp clients.

But if this were to turn around, you know the situation today, with higher projected farm prices, because of the short supply of grains, if this were to translate into higher food prices, that is going to affect the basis for our Food Stamp Program, the thrifty food plan.

We have to be prepared with a reserve, so that we do not have a situation, which, as you say, we come back to Congress with a request for additional funds without which we might not be able to serve people who need the food.

This reserve is protection against that kind of serious situation. We recognize that we live in a very volatile time.

Also, I think, with the changes in the farm bill, there are some changes, not as much as I think originally had been projected, in dairy prices, for example, which are going to impact on food prices. We need to be able to really protect that safety net, not in a way that we are hurting the program, or hurting the taxpayer, but having it there, in case we need it. If we do not need it, we do not use it.

FOOD STAMP RESERVE

Senator COCHRAN. Is there any expectation that the \$500 million in the reserve for food stamps will be used this fiscal year?

Ms. HAAS. No; we have had a steady trend of, every month since a year ago, at this time, declining participation. But we do have a volatile situation in food prices.

We do not know whether the economy will continue to improve as I believe it will. But some economists and talk show hosts believe it will not.

So if unemployment were to increase, we could see an increase in food stamp participation, and the reserve would be important.

Senator COCHRAN. You are not suggesting that this administration has us on a real sharp downward decline path, are you?

Ms. HAAS. No way.

Senator COCHRAN. Is that what you are predicting?

Ms. HAAS. No; in fact—

Senator COCHRAN. Are you predicting a major disaster, that we have—

Ms. HAAS. No.

Senator COCHRAN. Never seen before in the history of mankind?

Ms. HAAS. In fact—

FOOD STAMP DISASTER REQUIREMENTS

Senator COCHRAN. What is the largest amount of food stamps that have been allocated for a disaster that struck the United States? How do you foresee this huge calamity befalling the United States? I mean the news people need to know about this.

Ms. HAAS. I do not think we are seeing huge disasters. What we are talking about is a program that, today, serves 25.6 million people.

We also know that between the period of 1990 and 1994, we saw dramatic steep increases in participation when the recession began, up to, I do not remember the exact percentage, but it was more than 30 percent.

So if that were to occur, we would have to be prepared to get food to people who need it.

This reserve, again, is not going to be used unless it is needed. The disasters, such as earthquakes and floods, those represent a small amount, but they are important things to consider, because those are things that you can never predict.

Senator COCHRAN. Do you have any figures to support how much money was needed in an emergency for any single disaster—

Ms. HAAS. I would be happy to provide—

Senator COCHRAN. That would be interesting to know.

Ms. HAAS. Yes; I would be happy to provide that—

Senator COCHRAN. I do not know the answer to that.

Ms. HAAS. I would be happy to provide that for the record, because we do have, with the earthquakes, and with the floods, we certainly do have a record.

[The information follows:]

FOOD STAMP DISASTER ASSISTANCE

The greatest level of disaster assistance (\$90,039,741) was provided as a result of Hurricane Andrew, (Florida and Louisiana), Hurricane Iniki (Hawaii) and Typhoon Omar (Guam). These disasters occurred in August and September of fiscal year 1992; thus creating a need for a response to these disasters that extended into fiscal year 1993.

FOOD STAMP SAVINGS

Ms. HAAS. And I want to say for the record that I am very encouraged, because we have saved the Government \$1 billion in the last year, through the economic policies of the Clinton administration.

I am not trying to—I want to go back to your point, to clarify, I am not in any way trying to forecast a more dire situation in the future.

WIC PROGRAM SAVINGS

Senator COCHRAN. Well, I think also we have to recognize that program administrators have really saved a lot of money.

In the WIC Program, our own State administrator of the WIC Program, Mr. Barr, is an example of imaginative leadership, in making sure that you get the best product for the price you pay, with competitive arrangements for purchasing and all kinds of procedures that have been instituted.

Now, I am sure that other States have stories that are similar, in bringing efficiencies, making more food available to those who are eligible to participate in those programs.

I think the Mississippi model has become a national model, and more States are following the lead in that area.

Ms. HAAS. I would compliment, certainly, Mr. Barr, the State of Mississippi, as well as all of our State agencies in WIC. We have saved over \$1 billion annually, because of infant formula rebate programs. We have competitive bidding. What we are seeing again is the leveraging of Federal dollars, to make this program work cost effectively. We are taking the commitment to see that every woman, infant, and child that needs it has the benefits of WIC and managing it to reduce the costs.

I think we have a number of management strategies, like the infant formula rebates, that are contributing to that. So we have been able to grow as a program and reach all the people that need it, but do it in a way that also saves money for the Federal Government.

WIC FULL PARTICIPATION

Senator COCHRAN. I notice that you talk about the full WIC participation in this proposal, estimating a WIC-eligible population of 7.5 million by the end of the year. How do you define full WIC participation?

Ms. HAAS. First of all, let me say that, together with Congress's support, I think in 1997, we will both be very proud of that achievement.

What we have done is studied the numbers of the WIC eligibles, and by determining those numbers of people who will then seek WIC services, we have been able to estimate the level which represents full participation. These numbers have gone through revisions, but by the end of fiscal year 1997, we expect to reach 7.5 million people, women, infants, and children, which basically represents full participation.

I think that that is a tremendous accomplishment of both the Congress and the administration. That is why we are coming to

you this year, with these new revisions and with the new way that we are estimating some of those numbers. We also recognize that we have had a slowdown in program growth with a smaller growth in our budget request than we have had in the past.

WIC PARTICIPATION

I think that it is very important to recognize that we really have reached what we have all long sought, and that is that every woman, infant, and child, who is needy and at nutritional risk, has the benefits of this critical program.

Senator COCHRAN. It is interesting to note that if participation is lagging behind the anticipated levels of expected participation, if I read all this right, the budget estimates that the participation in the program will reach 7.275 million by the end of this year.

And your proposed increase would reach 7.5 million, as you suggested, but I am told that at the current time, actual WIC participation levels are now around 7 million. That is below the fiscal years 1996 and 1997 projected levels.

What evidence is there that there will be more participation, that you assume in your budget?

Ms. HAAS. There are several things. First of all, as we discussed earlier about food stamps, with WIC, we have seen an improving economy. We have seen the number of eligibles reduced significantly, because we have seen this improved economy.

Second, the numbers that you are citing reflect some of the seasonal changes that we see, where people who are going back to work are not using the benefits.

Our projections, however, are that at the end of fiscal year 1996, that we will see yearend participation at 7.3 million participants.

Our request is based on reaching 7.3 million at the end of 1996, and with an increase of \$50 million, we will reach the increased number of participants, to reach 7.5 million by the end of fiscal year 1997.

Senator COCHRAN. Well, on top of that, I understand, from these notes, that you have requested, as in the Food Stamp Program, a WIC Program reserve. You have requested a \$100 million budget authority reserve—

Ms. HAAS. Correct.

Senator COCHRAN. For WIC. That is a new thing, is it not?

Ms. HAAS. It is. There are two new things. On one hand, we are asking for the smallest request in budget authority in these past years for WIC and, on the other hand, we are asking for a contingency fund, because our estimates are based on a number of things that can vary, such as the rebates which we talked about earlier.

WIC REBATES

If the infant formula rebates fall below the \$1 billion we project, we would have to make that up. If food costs go up higher than our projections, we would have to make that up, and also, if the economy went into a spin.

So, therefore, we are asking for this contingency fund that would not be spent, unless it is needed; therefore, it would not be counted, unless it was used.

We believe that this is the kind of management approach that really protects those people who are needy, and need the benefits of WIC, but does not drain on the taxpayer, until that time that it is needed. So it is really an insurance policy, if you will.

WIC FOOD PACKAGE COSTS

Senator COCHRAN. I know you have to depend upon economic assessments, as you point out, to determine these projected costs. I notice the administration's projected costs of the WIC food package is estimated to go up to \$43.30 in fiscal year 1997 from the current estimate of \$42.01—

Ms. HAAS. Right.

Senator COCHRAN. For fiscal year 1996. How do these assumptions compare with the actual average cost of a WIC food package during the first 6 months of fiscal year 1996?

Ms. HAAS. I can certainly provide that to you, because I think it is important. And as I noted in a meeting this morning, one of the breakfast cereal manufacturers has just announced a decrease in that breakfast cereal's price.

[The information follows:]

SPECIAL NUTRITION PROGRAM FOR WOMEN, INFANTS AND CHILDREN FOOD PACKAGE COST

The average food package cost estimate for fiscal year 1996 is \$30.89. During the first six months of fiscal year 1996, the actual average food package cost has been \$30.87, two cents less than estimated.

Senator COCHRAN. Yes.

Ms. HAAS. I think we have to be constantly monitoring the economic situation and the real cost of the food package, so I would be happy to provide that to you. I think that that is really important.

Also, one other thing that I did not mention. In the past, when we had such large increases in appropriations the last 2 or 3 years, the increases acted as a buffer, as a protection, if we had increasing participation.

This year, we are coming in with the smallest request in budget authority in recent history, so we will not have that cushion, if you will, if there were to be significant increases.

So coupled together, this is a comprehensive, and I think a very conservative approach to building this program to where it needs to be.

FOOD DONATIONS PROGRAMS

Senator COCHRAN. In the commodity assistance and food donation area, I had a good tour through some of the warehouses and meetings with people in my State last year to see how this program worked in Mississippi.

I came away with the conviction that while the Federal dollars that are allocated to these programs are not really that huge, in terms of the percentage of the total cost of administering and getting these programs in place and providing the assistance to food kitchens and to those who are making available meals to those who take advantage of these programs, they are very essential in encouraging others to participate, focusing national attention and

high priority on the idea of making sure that nobody in America is going to starve to death out on the street.

I mean we have these programs, food stamps, WIC, school lunch and breakfast programs, but still, with all of that, and our best efforts with charities and others, there are still some people who fall through the cracks. These food donation programs help make sure that it is a national reality that we do not have people starving to death on the streets of America, or in the rural communities, or anywhere.

COMMODITY ASSISTANCE PROGRAM CONSOLIDATION

In that connection, in the current fiscal year, there was, for the first time, a consolidation of the three commodity assistance programs—the commodity supplemental food program, the emergency food assistance program, and the soup kitchens/food banks programs.

Let me ask you how you have chosen to allocate those funds. You have been given a lot of new authority because of this consolidation and responsibility for deciding how the funds are allocated. Could you tell us how you have allocated the funds among these three programs?

Ms. HAAS. Well, first of all, I wanted to comment that these programs are so important, because they do reach the hardest to reach, and the most vulnerable. But at the same time, so many of these programs grew up separately during the seventies and eighties, that streamlining and consolidating them, particularly for their administrative money, makes a lot of sense.

Combining funding for the soup kitchen, food bank, and TEFAP programs, for example, and allowing the States to make the determination how to use the funds, has really been very successful, rather than having multiple programs that are really carrying out very similar programs.

By putting it together, we were creating less of a burden on the States. We were simplifying our own administration, and that is cost effective, but the end-user customer was benefiting just as much.

So it is giving, to use the word you opened the hearing with, flexibility. It is giving more flexibility to the States to obtain the food they need for the hungriest of people.

For example, the homeless depend very much on soup kitchens and food banks. I think that streamlining has resulted in an improved program.

I can provide you the numbers and all of that in writing, if that is what you would like.

Senator COCHRAN. We do want to have that.

Ms. HAAS. Sure. I would be happy to.

Senator COCHRAN. I would appreciate your submitting the allocations among the programs for the record.

Ms. HAAS. I would be happy to do that.

COMMODITY SUPPLEMENTAL FOOD PROGRAM

Senator COCHRAN. Could you tell us why the budget request for this year retains the commodity supplemental food program as a separate earmark; that it requests that funding be allocated for the

commodity supplemental food program and for the emergency food assistance and soup kitchens programs within the consolidated commodity assistance program account?

You have just talked about how the flexibility through this program consolidation is good. It seems like you are requesting that we take a step backward.

Ms. HAAS. I think I will let our Administrator, Bill Ludwig, answer that one.

Senator COCHRAN. OK.

Mr. LUDWIG. I apologize. I did not quite catch all of the question. Why do we not—

Senator COCHRAN. The budget retains the commodity assistance program account, but requests that funding be earmarked for the commodity supplemental food program and for the emergency food assistance and soup kitchen programs. Why is that?

Mr. LUDWIG. I think one of the unique things about the CSFP program is that it is not provided in all 50 States, that it is limited to just 20 States, and in those 20 States, they seem to specialize more in an overall type program, in some areas, even more so than just feeding.

COMMODITY SUPPLEMENTAL FOOD PROGRAM PARTICIPATION

Senator COCHRAN. Do you think this should be a program that is available in all the States?

Ms. HAAS. This is a question that, to be very candid, we have struggled with, because, for the elderly population, the CSFP program still is very important.

It also is very important for those who are taking advantage of it in States like Louisiana and Michigan. It does not seem that there is any expansion on the States' part, beyond the States that we have currently participate.

I mean there does not seem to be initiation of new programs. This relates to WIC full funding, because the population is so similar. And as we have had more of a movement to WIC, we have to look at this very carefully.

NUTRITION PROGRAM FOR THE ELDERLY

Senator COCHRAN. In that connection, we notice that for the elderly feeding program, you are suggesting the funds be transferred to the Department of Health and Human Services. That is in the budget proposal.

I wonder why the budget does not, instead, propose that the funds be appropriated directly to HHS. Why the passthrough?

Ms. HAAS. Well, first of all, 96 percent of the sums today go from USDA, in cash, to the States.

In the older Americans reauthorization bill, there was recognition that this would be the most administratively and streamlined, efficient way to proceed.

We have worked very closely with HHS on this, so that this could proceed in a very smooth manner, and I am very hopeful that it will.

Senator COCHRAN. I have a number of other questions on that subject, and some of the others that we talked about, which I am going to submit for you and your staff to answer for the record.

FOOD STAMP ELECTRONIC BENEFITS TRANSFER

Well, let me just conclude by getting your assessment of the electronic benefits transfer program. I know, Mr. Ludwig, in your statement, you talk about this, that up to 15 percent of all food stamp benefits will be delivered in this way in 13 States. Is that 15 percent of the benefits in those States, or is that total food stamp benefits—

Ms. HAAS. Total

Senator COCHRAN. Of the Nation.

Mr. LUDWIG. Nationwide.

Senator COCHRAN. I see. Well, tell me what your assessment of this program is, and the practicality of it being implemented in all States.

Mr. LUDWIG. Our assessment of electronic benefits transfer is we think it is the wave of the future, Mr. Chairman. Your home State of Mississippi is in the process of implementing EBT.

About 48 other States are in the process of implementing EBT. It is a way for us to track benefit redemptions that we have not had in the past, with paper coupons.

It will not eliminate fraud, but it gives us a handle on being able to track fraud, and to better understand what is happening with the Food Stamp Program.

Everyone likes it. Nine out of every ten clients like EBT. Eight out of every ten retailers like EBT. It saves money for the Federal Government, and it saves money for the States. It is a win-win situation for everybody.

Ms. HAAS. I think, also, if I could add, it even goes beyond food stamps. EBT will allow us to deliver, cost effectively, all Federal benefits on one card. The Food Stamp Program has been the leader in this, but today, we are joined with other Federal agencies, so, again, it is really tremendously cost effective.

It takes away the stigma of paper coupons, but most importantly, it does help, as Mr. Ludwig said, reduce significantly, the trafficking of food stamps, which is going back to your opening comment, that we have been very aggressive in these years to reduce fraud.

And one of the tools that is most important is an accelerated implementation of EBT. It is necessary, in that it gives us data, but it also takes away the currency on the street, that can be traded for guns, or drugs, or cash. And I think that it is an important direction that we all have to go.

We have appreciated this over the years, as we have taken the leadership in the Food Stamp program.

SUBMITTED QUESTIONS

Senator COCHRAN. I appreciate very much the cooperation with this committee. As I mentioned, I have a number of questions that I have not asked this morning that I will submit for the record, and ask that you help ensure we get a response to, so we will fully understand the details of the budget request and what the options are for the committee as we proceed to make decisions about how the funds that we have allocated to us and how funds are allocated to you.

Ms. HAAS. OK.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

FOOD STAMP PROGRAM

Question. The fiscal year 1997 budget requests that the Food Stamp Program contingency reserve be increased from \$500 million to \$2.5 billion. While I understand the need for a reserve to protect the continuation of benefits, why do you believe a reserve at the level of \$2.5 billion is appropriate rather than a lower amount?

Answer. The reserve of \$2.5 billion will ensure that we will be able to issue full benefits with no hesitation. It also enables the Food and Consumer Service to assure program participants and the States that program operations will continue without interrupted delivery of food stamp benefits. The benefit reserve serves as insurance protecting the program's ability to get food to people who need it in the event of unforeseen changes in the economy. Should the predicted decline in food stamp participation in 1997 fail to materialize, the benefit reserve provides the mechanism to ensure that benefits authorized by the Food Stamp Act are promptly funded. Predicting turning points in caseload trends is notoriously difficult.

Forecast models work best when the relationships that determine participation are stable over time, a condition that may not apply to the Food Stamp Program. Neither USDA nor CBO predicted the dramatic increase in participation starting in late 1989 following the equally dramatic reduction in participation over the mid-1980s. Caseload increased 1.3 million, 2.5 million, 2.8 million and 1.6 million in successive years 1990, 1991, 1992, and 1993. At 1997 per person costs, increases of this magnitude would increase costs from \$1.26 billion to \$2.6 billion. Alternatively, if food costs inflation is just 2 percent higher than we anticipated, food stamps would need \$500 million of the contingency.

Recent experience may offer a false sense of security. Right now, we do not anticipate the need to use these funds and the budget estimates that they will be returned to the Treasury at the end of fiscal year 1997. Some may view the failure to tap into the benefit reserve in recent years as a sign that the reserve is no longer needed. But in any given year, forecasts have as much chance of being too high as they have of being too low. The benefit reserve provides the only available protection against these kinds of forecast errors.

Question. Do you expect to draw on the \$500 million Food Stamp Program contingency reserve available for fiscal year 1996?

Answer. It is currently estimated that none of the \$0.5 billion will be needed in fiscal year 1996.

Question. Has the contingency reserve been drawn on in any fiscal year? Please indicate the year and amount.

Answer. The information is provided for the record.

[The information follows:]

Food Stamp Program Reserve Appropriation
(In Billions of Dollars)

Fiscal Year						
	1991	1992	1993	1994	1995	1996
Reserve Appropriation	\$1.5	\$1.5	\$2.5	\$2.5	\$2.5	\$0.5*
Amount Used	1.5	0.9	0	0	0	

* It is currently estimated that none of the \$0.5 billion will be needed in fiscal year 1996.

Question. What level of Food Stamp Program disaster assistance has been provided so far this fiscal year out of the regular program appropriation? What level of disaster assistance funding was provided in fiscal year 1995? What is the greatest level of disaster assistance provided by the Food Stamp Program and when did this occur?

Answer. So far this fiscal year, Disaster Food Stamp Program assistance has been provided to victims in the Virgin Islands following Hurricane Marilyn in the amount of \$16,294,461 and to victims in several counties in Idaho as a result of devastating floods in the amount of \$39,148.

The Disaster Food Stamp Program was not operated in fiscal year 1995.

The greatest level of disaster assistance (\$90,039,741) was provided as a result of Hurricane Andrew (Florida and Louisiana), Hurricane Iniki (Hawaii) and Typhoon Omar (Guam). These disasters occurred in August and September of 1992; thus, creating a need for a response to these disasters that extended into fiscal year 1993. The information is provided for the record.

[The information follows:]

Florida	\$60,437,678
Louisiana	\$13,156,235
Hawaii	\$ 4,218,973
Guam	<u>\$12,226,855</u>
	\$90,039,741

Question. A \$17 million increase is proposed for the Food Stamp employment and training program. How many individuals does this program serve on an annual basis? How many Food Stamp recipients secure a job as a result of this program? What is the average cost per recipient of the employment and training program?

Answer. The fiscal year 1996 budget requested \$167,545,000 for the Employment and Training Program. However, based upon the latest data from the States we now estimate that the total costs for fiscal year 1996 will be \$182,200,000. This estimate includes \$75 million authorized for 100 percent Federally funded grants and \$79 million and

\$28.2 million for additional matching funds for participant dependent care reimbursements and additional State administrative costs, respectively. Therefore, the increase over the fiscal year 1996 level is actually \$2.5 million.

For fiscal year 1995, the Food Stamp Employment and Training (E&T) Program served 1,474,796 individuals.

Neither States nor the U.S. Department of Agriculture (USDA) collect data on the number of jobs secured as a result of the E&T Program; however, in fiscal year 1995, over 730,000 E&T participants were required to conduct an extensive employment search as a condition of eligibility for food stamps.

For fiscal years 1991 through 1995, the average annual cost per E&T participant was \$121. However, between fiscal year 1994 and 1995, the average cost per recipient increased from \$129 to \$143 as States implemented more intensive interventions.

Question. Is Food Stamp employment and training program effective in your view?

Answer. Although a comprehensive study of the Employment and Training (E&T) Program's effectiveness has not been conducted since the first year of operation, the increasing financial support contributed by States indicates that they view the E&T Program as useful and worthwhile in providing employment services, education, vocational training, and work experience to food stamp recipients who would otherwise not receive these opportunities. States have the flexibility to target recipients more likely to gain from the services provided, and can offer the most extensive and cost effective components possible.

Question. Total funding of \$12.526 million is requested for Food Stamp Program research, demonstration and evaluation costs. This is an increase of \$846,000 from the FY 96 level and more than the \$12.148 million expended for these purposes in fiscal year 1994. Why is this level of increase necessary? Please indicate the projects planned and the cost of each.

Answer. The increase was requested to evaluate the effects of State experimentation and welfare reform legislation on the nutrition security of recipients. Over the next few years, we are planning to devote several million dollars of the total funding to evaluation of the effects of welfare reform. States are already introducing important program changes through waiver requests. Proposed regulatory reform and anticipated legislative changes make it critical that FCS take the actions needed to ensure that baselines are in place so that change is evaluable when it comes. Projects planned would, at a minimum, address such issues as:

- What choices are States making? How are State choices changing the shape of the national Food Stamp Program? Proposed legislation and waivers give States substantial flexibility that is changing the shape of the FSP. A critical first step in assessing the consequences of the changes is to describe them fully and completely. This project will summarize the nature and extent of State choices in designing the FSP and assess the impacts of those choices on the FSP.

- What is the outcome of welfare reforms on the number and characteristics of program participants, program coverage, average and total benefits, food security and hunger, nutrition and health status, and other indicators of economic well-being?
- What research and methodological solutions are needed to assess the outcomes and consequences of change? A series of thorny methodological issues and complicated research issues must be solved to establish ways to obtain authoritative baseline and outcome data on how well the Food Stamp Program reaches low-income Americans, meets their food security needs and results in healthy, nutritious diets.
- How do State simplified Food Stamp Program proposals effect the States and FCS? Proposed legislation will allow States to create a simplified Food Stamp Program for participants receiving cash assistance. This project will provide technical assistance to (a) States developing a simplified program (so they understand the effect of choices before they submit a proposal to FCS) and (b) FCS (for assessing the cost neutrality of simplified program proposals).

Because these projects are still in the procurement process, specific dollar amounts are not available at this time.

FOOD STAMPS/STANDARD DEDUCTION

Question. The fiscal year 1996 appropriations act contains a provision prohibiting the use of funds to provide Food Stamp Program benefits to households if such benefits are calculated using a standard deduction greater than that in effect for fiscal year 1995. The fiscal year 1997 budget does not propose to continue this provision. Why?

Answer. The provision in the 1996 appropriations act prohibiting the use of a standard deduction greater than the fiscal year 1995 standard deduction did not change the language authorizing a standard deduction in the Food Stamp Act and hence affects only 1996 benefits. The Food Stamp Act continues to require USDA to annually adjust the standard deduction to reflect inflation. We do not believe that changes of this nature should be enacted through the appropriations process. The President's budget proposals for fiscal year 1997 and beyond do include a number of legislative program changes--including changes to the standard deduction--in the context of achieving a balanced budget and reforming welfare. We believe that such changes are more appropriately considered in the context of authorizing legislation, not appropriations.

Question. What would be the savings if fiscal year 1997 Food Stamp Program benefits continued to be limited to the standard deduction in effect for fiscal year 1995?

Answer. If fiscal year 1997 food stamp benefits were calculated using the fiscal year 1995 standard deduction, the Food Stamp Program savings would be \$275 million.

Question. What would be the savings if fiscal year 1997 Food Stamp Program benefits were limited to the maximum standard deduction that would have been allowable for fiscal year 1996?

Answer. If fiscal year 1997 food stamp benefits were calculated using the standard deduction that would have been allowable for fiscal year 1996, the Food Stamp Program savings would be \$150 million.

NUTRITION PROGRAM FOR THE ELDERLY

Question. The fiscal year 1997 budget proposes that funds for the Nutrition Program for the Elderly be appropriated to the Department of Agriculture and then transferred to the Department of Health and Human Services (DHHS). If the USDA relies on the DHHS to administer meal services supported by this program now and the Administration is proposing that it be directly administered by DHHS beginning in FY 1997, why shouldn't the funds for the program be appropriated directly to DHHS? Why pass this funding through USDA?

Answer. The Department and the administration support the full transfer of both the funding and the authorization of this program to DHHS. A bill which would consolidate the Nutrition Program for the Elderly (NPE) into the DHHS program funds is pending before the Senate Labor and Human Resources Committee, but to our knowledge, action has not yet been taken. The House Economic and Education Opportunities Committee has marked up its own consolidation bill. Assuming agreement and passage of a consolidation bill transferring authorization of NPE to DHHS, funds for NPE should be appropriated directly to DHHS. Until such time, we would suggest that the funds be appropriated to USDA and then transferred to DHHS.

Question. The budget justification indicates that program operators would retain the option of receiving some or all of their payment in the form of commodities. How would commodity purchases be handled if this program is administered directly by the Department of Health and Human Services, as the budget proposes?

Answer. USDA will transfer funds appropriated for the Nutrition Program for the Elderly (NPE) to the Department of Health and Human Service's (DHHS) Administration on Aging (AoA). The USDA proposes that AoA will survey States and Area Agencies on Aging (AAA's) to identify those opting to receive commodities and their elected commodity dollar value. USDA proposes that AoA will provide USDA with a compilation of the surveyed information and advance, to USDA, funds to provide a list of commodities available for the fiscal year to States and AAA's identified on the list provided by AoA. USDA will continue the dialogue with the AoA to finalize the operational details. USDA will take full responsibility for the procurement, shipping, and delivery of commodities. At the end of each fiscal year, USDA will reconcile the actual amount of funds spent on commodities with the amount advanced by AoA. USDA proposes that any unspent funds will be transferred back to AoA for disbursement to States and AAA's.

Question. In each of fiscal years 1994, 1995, and 1996, how many States have opted to receive benefits in the form of commodities?

Answer. Below is a chart depicting the number of States that have received commodities in fiscal years 1994, 1995, and 1996. Included in the chart are the number of States in which individual Area Agencies on Aging (AAA's) have elected to receive commodities in States which have opted for cash only. This option was instituted in 1988 to expand the use of commodities and allow flexibility at the AAA level within States that have traditionally elected to receive all USDA meal support in the form of cash.

	FY 1994	FY 1995	FY 1996
Number of States That Received Commodities	13	10	7
Number of States in Which AAA's Received Commodities	10	11	9

In fiscal year 1995, 4 percent of USDA support was provided in the form of commodities.

Question. The budget justification materials indicate that 253.571 million meals will be served in fiscal year 1996 and the reimbursement rate per meal will be 59.13 cents. Assuming that USDA continues to administer this program, how many meals will be supported by the fiscal year 1997 appropriation of \$150 million requested for the program and what is the assumed per meal reimbursement rate?

Answer. In light of recent program performance, total meal service is not expected to rise significantly between fiscal year 1996 and fiscal 1997. Assuming no change in meal service, the \$150 million fiscal year 1997 request would support a per meal reimbursement rate of 59.15 cents.

Subsequent to the preparation of the budget submission, a revised per meal reimbursement rate for fiscal year 1996 of 58.64 cents was announced in the Federal Register. This rate may not be increased. As a result, if fiscal year 1996 meal service is less than anticipated some resources may be carried forward into fiscal year 1997. These funds could support a higher per meal reimbursement rate in fiscal year 1997 or would expire.

Question. If the assumed per meal rate reimbursement is below the fiscal year 1996 level, what additional funding would be required to maintain the fiscal year 1996 rate?

Answer. No additional funding would be required to maintain the fiscal year 1996 per meal reimbursement rate in fiscal year 1997 under current program assumptions.

FOOD DISTRIBUTION ON INDIAN RESERVATIONS

Question. The appropriations justification materials indicate that, although fiscal year 1997 funding proposed for administrative expenses reflects a substantial decrease from fiscal year 1996, it will be adequate for program support at

present participation levels. What determines the appropriate level of adequate administrative support for this program if it is not based on participation levels?

Answer. All agencies administering the Food Distribution Program on Indian Reservations (FDPIR), regardless of their level of participation, have program administrative responsibilities and costs. However, the adequacy of administrative support for the FDPIR should be assessed primarily in terms of program participation levels, which had been declining significantly until the last few years without commensurate reductions in administrative funding. Despite modest increases in participation beginning in fiscal year 1994, the Department believes that the \$18 million requested for administrative support for fiscal year 1997 will be adequate. When measured in terms of funds available per participant, this degree of support would still far exceed per-participant administrative funding during years of higher participation. However, program participation has proven to be extremely volatile and requires close monitoring to project future funding needs.

SUPPLEMENTAL FEEDING PROGRAM FOR WOMEN, INFANTS AND CHILDREN (WIC)

Question. Consistent with the 1996 Appropriations Act, the budget proposes that WIC carryover funds exceeding \$100 million be transferred to the Rural Utilities Service. The Budget assumes that \$36 million will be transferred in 1996, based on an anticipated WIC carryover of \$136 million. Has the actual WIC carryover now been determined? What is it?

Answer: The actual WIC carryover has not yet been determined. The closeout process is still in the preliminary stages. However, preliminary numbers show \$136 million in unspent recoverable funds.

Question. If it is higher than the \$136 million projected, will the additional carryover be transferred to the Rural Utilities Assistance Program?

Answer. Although carryover figures are preliminary, at this time, we do not anticipate any additional recoveries of funds to be transferred to the Rural Utilities Assistance Program.

Question. When do you expect the funds to be transferred and available for the Rural Utilities Assistance Program?

Answer. Funds are expected to be transferred to the Rural Utilities Assistance Program in May of 1996.

Question. Please provide for the record the actual WIC participation levels and food costs (including a breakdown of the food benefit and administrative costs) for each month in fiscal year 1995 and fiscal year 1996, to date.

Answer. The information is provided below.

Special Supplemental Food Program (WIC)

Month	Participation (in thous)	Food Cost 1/ (in thous)	Admin 1/ (in thous)	Total Cost 2/ (in thous)
FY 1995				
October 94	6,849	207,176	61,224	268,400
November	6,836	209,713	69,459	279,172
December	6,743	205,449	61,078	266,527
January 95	6,846	207,019	60,352	267,371
February	6,813	205,744	72,119	277,863
March	6,925	206,704	91,656	298,360
April	6,858	206,079	68,296	274,375
May	6,905	213,921	74,492	288,413
June	6,968	207,962	68,194	276,156
July	6,195	220,041	72,180	292,221
August	7,085	213,214	73,151	286,365
September	6,994	208,514	132,178	350,713
Total 1995	6,895	2,512,682	904,378	3,427,082
FY 1996				
October 95	7,083	218,121	69,287	287,408
November	7,091	216,775	54,305	271,081
December	6,895	208,471	93,594	302,066
January	7,117	224,180	82,763	306,943
February	7,107	220,208	78,276	298,485

1/ Excludes estimated recovered and reallocated funds.

2/ WIC Studies and Surveys and SF-269 WIC Farmer's Market Nutrition Program data are reported as administrative costs with the month of September.

Question. The fiscal year 1997 budget proposes a first-time WIC reserve of \$100 million in budget authority, to be tapped in cases where actual food costs exceed budget estimates. With WIC participation lagging behind funded levels, reduced food benefit costs, substantial infant formula rebate savings, and carryover funds, why do you believe it is now necessary to establish a WIC program reserve?

Answer. The contingency fund is a necessity as WIC becomes fully funded. In the past, budget requests allowed for participation increases of 400,000 to 500,000 participants annually. Significant appropriation increases provided a buffer against food package cost increases or decreases in rebate savings. If program costs increased beyond anticipated rates, participation would continue to increase, albeit at a slower rate, and high priority women, infants and children were

protected from losing program benefits. Funds designated for program growth provided a buffer against unforeseen events.

As WIC reaches full participation, budget authority requests will level off, and reflect only anticipated food price changes and changes in the number of eligible persons. We fully expect that participation will reach projected levels and that carryover will be substantially reduced during fiscal year 1997. Thus there will no longer be a buffer against unexpected food price inflation, shifts in the volatile infant formula market, or an unexpected increase in unemployment. The contingency fund serves to guard against these uncertainties rather than placing program participants at risk.

Question. For fiscal year 1996, the appropriations act made \$20 million available for food benefits which would have otherwise been available to States for nutrition services and administration. What has been the impact of diverting this funding from nutrition services and administration to food benefits.

Answer. Diverting funding from nutrition services and administration (NSA) to food prevented WIC State agencies from receiving a guaranteed administrative grant per person (AGP) as mandated by P.L. 101-147. The AGP is used in determining States' NSA grants. The diversion of \$20 million in NSA funds had the effect of reducing the fiscal year 1996 AGP to \$.31 below what it would have been otherwise. As a result, all States received lower NSA grants.

The minimum guaranteed AGP was established in order to prevent erosion of NSA resources as a larger proportion of the caseload was financed with rebates, and reflected a recognition of the importance of the nutrition and health services provided by WIC. Maintenance of adequate administrative funds is also critical during periods of program expansion. Any reduction in the guaranteed AGP negatively impacts WIC State agency ability to develop or maintain the infrastructure needed to provide good services.

Question. The fiscal year 1996 appropriations act also permitted \$4 million in unobligated balances for supervisory and technical assistance grants to be transferred to the WIC program. Do you intend to make this transfer? If not, why?

Answer. We do not intend to transfer the additional funds into the WIC Program, because funding for WIC in 1996 is projected to be more than adequate.

Question. For each of the past five fiscal years, please provide the total amount of WIC funding retained by the States and "carried forward" into the next fiscal year.

Answer. I will provide the information for the record.

[The information follows:]

<u>Fiscal Year</u>	<u>Amount</u>
1991	\$27,429,625
1992	\$34,662,544
1993	\$35,658,673
1994	\$39,498,515
1995	\$51,198,066 (preliminary)

WIC-ELIGIBLE CEREALS

Question. It is my understanding that the Food and Consumer Service has announced its intent to propose rulemaking to potentially change the limit on the sugar content of hot and cold cereals eligible for purchase in the WIC program.

This issue has been debated extensively as I recall, and a number of credible organizations have previously been on record opposing changing this limit. Is this rulemaking a USDA-driven initiative? If not, what precipitated USDA proposing this rulemaking?

Answer. The Department is not proposing new rules or policy at this time; the effort is exploratory. The current action was initiated by USDA in response to inquiries asking the Department to re-examine the need for a Federally imposed 6-gram sugar limit for WIC-eligible adult cereals. Members of the public have expressed concern that research conducted since the 1981 WIC food package regulations were issued indicates that the independent factor of sugar intake does not appear to increase one's risk of developing coronary heart disease, diabetes mellitus, obesity or hyperactivity. Therefore, the Department, in being responsive to these requests, is soliciting comments from WIC State and local agencies, nutrition and health authorities, and other interested parties on the continued appropriateness of the 6-gram sugar limit for WIC-eligible adult cereals.

Question. Has there been new information or research would discredit the findings for four years ago and would justify changing this limit?

Answer. While USDA has not determined that a policy change is warranted, new information on the link between sugar and health suggests that a reexamination of the policy is appropriate. As stated in the Federal Register Notice of March 18, 1996, USDA is aware that the knowledge about the association of sugar consumption and chronic diseases has been evolving over recent years. Recent studies have found that any fermentable carbohydrate (e.g, starches and sugars) can contribute to the incidence of dental caries. However, with the exception of dental caries, the independent factor of sugar intake does not appear to increase one's risk of developing diseases such as coronary heart disease, diabetes mellitus, obesity or hyperactivity. Therefore, the Department is seeking advice on whether these newer findings warrant a change in the sugar limit for WIC-eligible cereals.

Question. What has been the cost to date of proposing this rulemaking? What will be the total cost of undertaking this rulemaking?

Answer. The cost associated with the publication of this solicitation for public comments to USDA is negligible. Should the Department proceed with a formal rulemaking proposal, we expect that costs incurred by the Agency would still be very minor.

Question. What impact would changing the limit have on the cost of the WIC Program?

Answer. The effort currently is exploratory and is not a formal rulemaking at this time. If the Department proceeds with a proposed rule, we anticipate that it would have no cost impact. Such a rule would only increase State flexibility in the choices of cereals available to States for use in their WIC programs. Regulations will continue to permit a State to establish the Federally eligible cereals to be used in their State. States make decisions on eligible WIC foods on the basis of numerous factors, cost and nutritional content being primary considerations.

Question. Given that this issue has generated a certain amount of controversy in the past, some may consider this to be a rather large issue. Why, then, was it not included in USDA's most recent unified agenda?

Answer. We would like to clarify that the Department's recent Federal Register notice is simply a preliminary public call for views by all interested parties on current regulatory requirements for WIC cereals in light of new research findings. The action is not a rulemaking or a proposed rulemaking nor does it constitute any commitment on the part of the Department to such. This action is intended to get a sense of the public as to the advisability of taking any regulatory action and to allow the public to present scientific and anecdotal information of relevance to the issue. It was due to an oversight in processing that this Notice was inadvertently excluded from the April edition of the unified agenda.

If, based on public reaction, the Department finds that proposed rulemaking would be merited, it will be sure to include such proposed rulemaking in a subsequent unified agenda. In the meantime, the public, including Congress, is invited and encouraged to submit comments in response to the Notice to the Department up to June 17, 1996.

SCHOOL MEALS INITIATIVE/TEAM NUTRITION

Question. Secretary Haas, you indicate in your prepared statement that there are already 7,000 Team Nutrition Schools in all 50 states and you anticipate tens of thousands of Team Nutrition Schools soon. What defines a "Team Nutrition" school?

Answer. A Team Nutrition School is a school currently participating in the National School Lunch Program whose principal and food service manager have agreed to:

- Support USDA's Team Nutrition Mission and principles.
- Demonstrate a commitment to meet the Dietary Guidelines for Americans.
- Designate a Team Nutrition School Leader.
- Distribute Team Nutrition materials to teachers, students and parents.
- Involve teachers, students, parents, food service personnel and the community in interactive entertaining nutrition education activities by having at least one nutrition activity per year.

- Demonstrate a well-run Child Nutrition Program.
- Share successful strategies and programs with other schools.

Team Nutrition Schools are the community focal point for USDA's Team Nutrition. Across the country Team Nutrition Schools are leading the way to local level implementation of the School Meals Initiative for Healthy Children. They serve as the catalyst for bringing together all stakeholders who will work to ensure healthier school meals and more information for children and their families. A Team Nutrition School is designated for a two year period.

The principal and school food service manager together sign the enrollment form and commit to Team Nutrition. To date, we have more than 11,000 schools enrolled in the Program. Through Team Nutrition, we are seeing an unprecedented level of new enthusiasm for the School Lunch Program and its importance to diet and health. Through Team Nutrition's community approach School Officials, School Food Service Workers and School Children feel empowered to take control of their diets and change their health for the better.

Question. What does a "Team Nutrition" school receive in terms of materials and USDA assistance/support?

Answer. We have developed and continue to develop a variety of nutrition education materials for use in school and for parents to use at home to reinforce nutrition education learned in school.

This fall, each school will receive a Team Nutrition School Resource Kit filled with a variety of educational materials which they will use in developing and delivering their nutrition education program. These materials include the following:

- A series of posters with nutrition oriented messages which feature the Disney characters
- Counter Cards with nutrition oriented messages and the Disney characters
- Parent Tip Sheets
- Nutrition Education Activity Booklets
- A Usage Guide which explains how to make the most of the materials provided
- Reproducible nutrition education materials for use in class and as parent take home items
- "How to Guides" for the Team Nutrition School Leaders to help them in working with local supporters and developing nutrition education activities

The first 10,000 Team Nutrition Schools will receive the Great Nutrition Adventure Action Kit and one In-Classroom Curriculum Kit from Scholastic Inc. We will be providing additional materials to the schools as they become available such as the School Lunch Challenge Recipes and other posters and educational materials.

In addition, we are working with more than 200 organizations from the agriculture, health, education, and nutrition communities who support Team Nutrition's mission and

principles and are committed to working with Team Nutrition schools to support their local efforts.

Question. USDA is funding the development of nutrition education and promotional materials. Given the fiscal constraints on local education budgets, will schools have the resources to purchase and replicate these materials for distribution? What assistance is USDA providing to enable schools to access and utilize these materials?

Answer. Team Nutrition Schools will receive a supply of resource materials to use for their nutrition education activities at no cost. In addition, they may order additional materials for a minimal shipping and handling charge. All materials are free.

USDA recognizes that resources are constrained at all levels; Federal, State, and local. That is why USDA has formed strategic partnerships with the private sector to leverage scarce dollars at the Federal level for maximum impact. USDA is working with more than 200 organizations from agriculture, health, education, nutrition communities who support Team Nutrition's mission and principles and are committed to working with Team Nutrition schools to support their local efforts. We have contacted National level supporters to engage them in activities with the schools on a community level. Also, we will assist schools in linking with local supporters who may be able to help fund materials and/or provide for other activities. They may also help in the distribution of materials and positive nutrition education messages in the community.

Question. You indicated that Team Nutrition leverages a small investment of public resources through a wide array of public-private partnerships to extend its reach and effectiveness. Please provide a list of each public private partnership entered into by USDA, and indicate the amount of Federal funds, by fiscal year, and private funds invested in each.

Answer. Team Nutrition has entered into agreements with over two hundred partners as part of our efforts to leverage public resources. These organizations include both public and private nutrition, health, education, entertainment and food industry groups that support Team Nutrition's mission and principles. Team Nutrition has invested public resources with private partner organizations through cooperative agreements with BVPD, Inc. (Disney) and Scholastic, Inc.

Public-private partnerships are critical to the success of Team Nutrition, both to ensure that we reach children through the media they use, and to leverage scarce Federal resources with private sector support. The Food and Consumer Service is working with the Economic Research Service in an effort to collect and analyze information to quantify the dollar value of private sector contributions to Team Nutrition. The analysis will determine the value of donated time to air Team Nutrition public service announcements, in-kind marketing support and product discounts from Scholastic, Inc., and other donated services. We expect to complete our analysis shortly, and will provide it to the Committee as soon as it is available.

Question. Please tell us how the fiscal year 1995 funds for the school meals initiative were spent. What level of fiscal year 1995 funding provided for this initiative has been carried over into fiscal year 1996? How are those carry-over funds being spent?

Answer. I will be happy to provide the information for the record.

[The information follows:]

TRAINING AND TECHNICAL ASSISTANCE COMPONENT	DOLLARS (in millions)
Food Service Technical Assistance Materials	\$ 5.55
Food Service Training and Grants to States	\$ 3.40
USDA/FCS Sponsored Training of School Food Service Personnel	<u>\$ 1.20</u>
	\$10.15
NUTRITION EDUCATION COMPONENT	DOLLARS (in millions)
Children's Education Resources	
In-School Education Materials	\$ 2.80
Community Education Materials	\$ 2.80
Partnership Support	\$ 1.10
Children's Communication and Technology	\$ 2.80
Evaluation	<u>\$ 1.00</u>
	\$10.50

Fiscal year 1995 funds were obligated over a two-year period with \$7.3 million carried over from fiscal year 1995 to 1996.

Question. Funding of \$10.5 million was provided for the school meals initiative for fiscal year 1996. The Committee directed that these funds be used to provide training, education, and technical assistance to school food service personnel, and food service training grants to States. Have the fiscal year 1996 funds provided for the school meals initiative been allocated: when and for what specific purposes?

Answer. The information will be provided for the record.

[The information follows:]

Funds were allocated on March 15, 1996 for Training and Technical Assistance as follows:

	DOLLARS
Food Service Technical Assistance Materials	\$1,112,000
Health and Taste Initiatives	\$ 800,000

Print and Electronic Food Service Resource System	\$ 328,000
Food Service Training Grant to States	\$2,000,000
NFSMI Cooperative Agreement	<u>\$ 250,000</u>
	\$4,490,000

Funds were allocated on March 15, 1996 for Nutrition Education as follows:

	DOLLARS
Children's Education Resources	
In-school Education Materials	\$2,130,000
Community Education Materials	\$1,800,000
Children's Communications & Technology	\$ 880,000
Team Nutrition Partnership Support Resources for TN Schools	\$ 350,000
Partnership Network Support	\$ 650,000
Evaluation	\$ 200,000
	<u>\$6,010,000</u>

Question. Have the fiscal year 1996 funds provided for the school meals initiative been allocated: When and for what specific purposes?

Answer. I will be happy to provide the information for the record.

[The information follows:]

I. FOOD SERVICE TRAINING AND TECHNICAL ASSISTANCE

	<u>FY 96</u>
Technical Assistance Materials	\$ 1,112,000
Health and Taste Initiatives	800,000
Print & Electronic Food Service Resource Systems	328,000
NFSMI Cooperative Agreement for Food Service	250,000

II. CHILDREN'S EDUCATION RESOURCES

In-school Education Materials	2,130,000
Community Education Materials	1,800,000

III. FOOD SERVICE TRAINING GRANTS
TO STATES 2,000,000

IV. USDA/FCS DIRECT TRAINING
& EDUCATION No FY 96 funds

V. CHILDREN'S COMMUNICATIONS
& TECHNOLOGY 880,000

VI. TEAM NUTRITION PARTNERSHIP SUPPORT
Resources for Team Nutrition Schools 350,000

Partnership Network Support	650,000
VII. EVALUATION	200,000
TOTAL	\$10,500,000

Question. What portion of these funds have been spent by the Agency and what portion has been allocated to states?

Answer. Of the \$10.5 million in fiscal year 1996 funding for the School Meals Initiative for Healthy Children, \$2 million was awarded directly to States for training grants. An additional \$2.162 million will be spent developing, printing and distributing technical assistance materials to State agencies and local school food service authorities. Therefore approximately 40 percent of the fiscal year 1996 funds will go directly for State use.

Another 59 percent will be invested in nutrition education materials and related initiatives that are targeted toward students, teachers, parents and other community organizations. Less than 1 percent -- \$70,000 -- was allocated to our regional offices to help defray costs of materials distribution and travel specifically related to the School Meals Initiative for Healthy Children.

Question. Will all states be awarded a grant? If not, why? What is the basis of awarding grants?

Answer. All State agencies that administer the National School Lunch Program are invited to compete for Team Nutrition Training Grants for Healthy School Meals to provide training and technical assistance to school food service professionals. Applications meeting the screening requirements will be reviewed by a panel and scored against the technical evaluation criteria outlined in the Request for Application for Team Nutrition Training Grants. Only the highest scoring applications that clearly demonstrate that the State has an overall plan for achieving its training and technical assistance goals will be funded.

Between these criteria and funding limitations, it is unlikely that all States would receive awards.

Question. How much funding will be allocated for grants to states in fiscal year 1996, as compared to fiscal year 1995? How many grants will be awarded from the fiscal year 1996 funds, as compared to fiscal year 1995?

Answer. Approximately \$2 million will be available to fund Team Nutrition Training Grants in fiscal year 1996; approximately \$3.4 million was awarded in fiscal year 1995. Grants will range from a minimum of \$50,000 up to \$200,000 for an individual State and up to \$400,000 for a coalition of States. The number of grants to be awarded in 1996 will depend upon the number of high quality applications recommended for funding and the grant amounts requested. In 1995, 19 grants representing 26 State agencies were funded.

Question. The fiscal year 1997 request for the school meals initiative is \$18.5 million, \$8 million above the FY 1996 level. What portion of these funds will be allocated for education and what portion for training and technical

assistance? Please describe specifically how these funds will be allocated and for what purposes within each of these categories. Compare the proposed allocation of the FY 1997 funds requested to how the funds provided for the school meals initiative were used in each of fiscal years 1995 and 1996.

Answer. We expect to use the fiscal year 1997 funds for School Meals Initiative for Healthy Children in the same manner as we have used these funds in fiscal year 1995 and 1996. Approximately 50 percent will be used for nutrition education and related activities and 50 percent for training and technical assistance. Additional detail will be provided for the record.

[The information follows:]

(Estimates)	FY 1995	FY 1996	FY 1997
I. Food Service Training and Technical Assist.			
Tech Assist. Materials	\$5,550,000	\$1,112,000	\$2,300,000
Health & Taste Initve		\$800,000	\$300,000
Print & Electronic Food Service Resource Systms	(included in \$5.5 M)	\$328,000	\$400,000
NFSMI Coop. Agreement for Food Service	(included in \$5.5 M)	\$250,000	\$800,000
II. Children's Education Resources			
In-school Educ. Matrls	\$2,700,000	\$2,130,000	\$3,500,000
Community Educ. Matrls	\$2,250,000	\$1,800,000	\$2,000,000
III. Food Serv. Training Grants to States	\$3,400,000	\$2,000,000	\$4,000,000
IV. USDA/FCS Direct Training & Education	\$1,810,000	No FY 96 Funds	\$1,500,000
V. Children Communicatn & Technology	\$2,800,000	\$880,000	\$1,800,000
VI. Team Nutrition Partnership Support			
Resources - TN Schools	\$350,000	\$350,000	\$800,000
Partnership Ntwrk Suppt	\$750,000	\$650,000	\$800,000
VII. Evaluation	\$1,000,000	\$200,000	\$300,000
TOTAL \1\	20,610,000	10,500,000	18,500,000

\1\ The total for fiscal year 1995 includes fiscal year 1994 carryover funds.

Question. For each of Fiscal Years 1995 and 1996, please indicate the level of funding allocated for the School Meals Initiative used to fund promotional and public relations

activities for "Team Nutrition". How much are you proposing to spend on these activities in 1997?

Answer. Team Nutrition is a grass roots health promotion program designed to help children change their eating behaviors to bring them in line with the Dietary Guidelines for Americans. This nutrition education program reaches children using the schools as the community focal point with reinforcing messages at home, in the community and in the media. The whole program, from educational materials for the classroom to public service announcement to school food service training activities, is promotion based using proven science based models and information to support the implementation of the School Meals Initiative for Healthy Children.

Team Nutrition actively engages children where they live, learn and play by delivering positive nutrition messages in fun and entertaining ways. As a nutrition education promotion program, Team Nutrition reinforces these consistent messages continuously throughout a child's day. As indicated above, Team Nutrition utilizes the media as one tool to reach children with specific education messages and to reach parents and educators to encourage their participation in Team Nutrition in their community.

In fiscal year 1995, \$400,000 was allocated for promotional and public relations activities for Team Nutrition. In fiscal year 1996, \$200,000 was allocated for these activities.

Question. In its report accompanying the fiscal year 1996 appropriations bill, the Committee directed USDA to act on cooperative agreements with the Food Service Management Institute, as authorized, and to provide funds to fully utilize the Institute to conduct applied research, and to provide technical assistance, training, and information to schools to carry out the healthy school meals initiative. Have you made any of the fiscal year 1996 funds available to the Food Service Management Institute? For what purpose? What are your plans?

Answer. Two cooperative agreements were funded with the National Food Service Management Institute through 1995 funding. These two agreements provided \$142,538 for the development of the purchasing manual on food specifications called "Choice Plus" and \$266,175 for the establishment of equipment and staff for the Customer Service Help Desk. Both of these cooperative agreements continue to operate at this time under 1995 funding. The funding will continue for "Choice Plus" through May 1996, and for the Customer Service Help Desk through July 1996.

The fiscal year 1996 budget included the following for the NFSMI Cooperative Agreement:

Healthy Meals Help Hotline: \$250,000

Procurement training and Menu Review Assistance are planned for fiscal year 1997 funding.

Question. USDA funded a cooperative project with the Food Service Management Institute to develop a Purchasing Manual and this manual will be distributed to schools during this school term. The Food Service Management Institute tells me that workshops are needed to help food service personnel

learn to use this manual. How do we carry forward these projects that have been started, such as the purchasing manual? Are you planning to use the Food Service Management Institute (through a cooperative agreement) to teach food service personnel how to use this information?

Answer. The purchasing manual on food specifications called "Choice Plus" is scheduled to be completed by the end of May 1996. The Department of Agriculture/Food and Consumer Service has budgeted 1996 funds for the printing of 23,000 copies of this manual to be distributed to all National School Lunch and School Breakfast Programs in the United States and the Islands. The manual will not be ready for distribution until late summer or early Fall 1996. The Food and Consumer Service will be dependent on 1997 funding to determine if a commitment can be made to fund a cooperative agreement with the National Food Service Management Institute for the teaching of food service personnel on how to use this information.

Question. Have you considered providing funds to the Food Service Management Institute to prepare an equipment manual for schools to use in knowing the right equipment to purchase?

Answer. The equipment research project, completed March 1996 by the National Food Service Management Institute was done under the grant agreement in response to a Department of Agriculture, Food and Consumer Service's 1994, request. The Food and Consumer Service agrees with the National Food Service Management Institute's goal of developing a user's manual as an outcome of this research. We will support the completion of this project under the grant agreement funding since that is how the project was originally funded.

Question. Or, to expand the Customer Service Help Desk to provide technical assistance to schools that need on-site help?

Answer. The Food and Consumer Service is pleased with the progress of the Customer Service Help Desk. A recent promotion of this service through a mailing targeted at 18,000 program cooperators has resulted in a daily increase in phone calls and other service opportunities. The "CALL YOUR HEALTHY FOOD LINE" (1-800-YHF-LINE) is creative and is capturing the interest of local school food service staff. Food and Consumer Service has set aside 1996 funds for the continuation of this cooperative agreement.

Question. I understand from school food service personnel that the data base necessary to do nutrient analysis of school meals is not complete. What are your plans for funding completion of the data base?

Answer. The National Nutrient Database for Child Nutrition Programs is a cooperative effort with the Department of Agriculture (USDA)/Agricultural Research Service, Nutrient Data Laboratory and USDA/Food and Consumer Service through an interagency agreement. The Food and Consumer Service is securing the services of a private vendor to obtain and enter data of processed food used in the school food service programs. The interagency agreement with the Agricultural Research Service is currently in clearance. The request for proposal on contracted services is under review. We anticipate a third release of the National Nutrient Database for Child Nutrition Programs by the end of the calendar year.

CENTER FOR NUTRITION POLICY AND PROMOTION

Question. Why is it necessary to establish a separate appropriations account for the Center?

Answer. We believe that although the mission of the Center for Nutrition Policy and Promotion supports nutrition education objectives in other FCS food program appropriations, its objectives are sufficiently distinct to require a separate appropriation. The Center is currently funded from the Food Program Administration (FPA) appropriation of the Food and Consumer Service. The FPA appropriation is generally used to support the general administrative costs of the agency and is not designed to support a specific program initiative like the Center. Also, a separate appropriation will highlight our goal to improve the nutritional status of all Americans without competing for funds with other worthy goals of the Department of Agriculture. In addition, a separate appropriation would provide a mechanism for better Congressional oversight of the program.

Question. You indicate that the mission of the Center for Nutrition Policy and Promotion is to improve the nutritional status of Americans by serving as the focal point within USDA for linking scientific research to the consumer. How do you intend to bring research to the consumer?

Answer. The Center links scientific research with the consumer in several ways. One basic way it accomplishes this is by coordinating USDA's efforts to integrate information from scientific research with the nutrition education messages and implementation policies of CNPP and other government agencies: Center staff study key scientific reports and other scientific literature, conduct consumer research in-house or by contract, and use the findings to develop consumer oriented guidance materials. Some recent specific examples are:

The Center served as the lead within USDA to coordinate with HHS the review of the Report of the Dietary Guidelines Advisory Committee and the preparation of the 1995 *Dietary Guidelines for Americans*. The Dietary Guidelines provide the best, most current advice from health and nutrition experts, based on the latest scientific research. As part of the preparation process, the Center sponsored research in collaboration with HHS to test consumer reactions to specific design and content elements of an early draft of the Guidelines. The Center is formulating plans to develop materials based on the 1995 Dietary Guidelines that target messages to different audiences, such as children 2 years and older, parents, and care givers. Dietary guidance materials developed by the Center will be incorporated into Team Nutrition initiatives targeted at school age children.

The Food Guide Pyramid is an outline of what to eat each day to follow the Dietary Guidelines for Americans. The Pyramid graphically illustrates USDA's research-based food guidance system that translates nutrient recommendations into recommendations on food intakes, and provides a framework for selecting the kinds and amounts of foods to provide a nutritionally adequate diet. The Center is updating the research that supports the food guide to incorporate changes in food composition, food consumption, nutrition recommendations, and food technologies that have occurred since the original

research to develop the food guide was conducted. In addition, the Center plans to initiate development of a prototype of the next generation of food guides by developing a food guide pyramid specifically for children. As part of this effort, the Center plans to conduct technical nutrition analyses of children's current diets to compare with the existing food guidance system, and to conduct consumer research with children, parents, and care givers.

In 1995, the Center released the Healthy Eating Index (HEI), an aggregate measure of overall diet quality. The HEI provides a picture of the foods people are eating, the amount of variety in the diet, and their compliance with specific dietary recommendations. The HEI report showed that the diets of most Americans need improvement; the average score was 64 of a possible 100 points. Follow-up analysis has shown that low-income individuals are more likely to have poor HEI scores, as are individuals from the teen years to middle adulthood. The data used for the HEI come from the USDA Continuing Survey of Food Intakes by Individuals, demonstrating a new use for this important survey series. From this initial research, the Center plans to expand the use of the HEI by developing computer software, such as a CD-ROM program that complements existing commercially available software, which readily computes the HEI from an individual's dietary intake data. This will not only help nutrition and health professionals but American consumers also. In addition, the Center has embarked on developing a "consumer friendly" version of the HEI that will allow consumers to readily evaluate their own overall diets. This type of ready access to a summary measure of healthful eating will help consumers adopt dietary practices that will meet recommendations of the Dietary Guidelines for Americans and the Food Guide Pyramid.

Question. What sources does the Center rely on for its research?

Answer. The Center relies on several sources for its research (as previously stated): These include:

- Food consumption and attitudinal survey data, mainly from USDA's Agriculture Research Service (ARS)
- Food composition data from ARS
- The Consumer Expenditure Survey data, from the Bureau of Labor Statistics
- The food supply series from USDA's Economic Research Service (ERS)
- Collaboration with other government agencies, universities, nonprofit organizations, and the private sector
- Extant scientific literature, e.g., peer reviewed scientific journals and consensus reports
- Center staff and resources

Question. The testimony includes as accomplishments of the Center the 1995 Dietary Guidelines/Food Guide Pyramid, the

annual report of the cost of raising a child, the revision of the Thrifty Food Plan, the Family Economics and Nutrition Review. While the Center may be responsible for revisions or continuation of these efforts, they have been ongoing for some time. What work is being carried out by the Center which was previously performed by the Food and Consumer Service (former Food and Nutrition Service), elsewhere at USDA, or by another Federal agency? What new tasks is the Center performing?

Answer. New tasks performed by the Center include: Developing nutrition promotion strategies for the 1995 Dietary Guidelines; analyzing the cost-effectiveness of nutrition promotion programs; development of dietary guidance materials targeted at school age children; constructing, publishing, and updating a Healthy Eating Index, as well as developing versions of the HEI for use by nutrition and health professionals and consumers.

The Center is performing one task that was previously performed by the Food and Consumer Service: Coordination of the U.S. Plan of Action for Nutrition.

The cost of raising a child and publication of the Family Economics and Nutrition Review (formerly Family Economics Review) were done by the Family Economics Research Group of ARS. Functions performed by the former Human Nutrition Information Service (HNIS) which was integrated with ARS in 1994 include: Updating and revising the family food plans, including the Thrifty Food Plan; updating the nutrient content of the U.S. food supply and analyzing its trends.

Question. Please provide, for the record, an object class breakdown of the Center for Nutrition Policy and Promotion's funding for fiscal year 1996 and for the fiscal year 1997 request.

Answer. The information is provided for the record.

[The information follows:]

Food and Consumer Service Classification by Objects Estimated 1996 and 1997 Center for Nutrition Policy and Promotion			
Personnel Compensation		1996*	1997
Washington, DC Field		[2,253]	2,361
11.0	Total personnel compensation	1,881	1,971
12.0	Personnel benefits	[372]	390
13.0	Benefits for former personnel Total pers. comp. and benefits	[2,253]	2,361
Other Objects			
21.0	Travel	[27]	28

22.0	Transportation of Things	[6]	6
23.2	Rental payments to others		
23.3	Comm., utilities, and misc. Charges	[12]	12
24.0	Printing and reproduction	[57]	59
25.1	Advisory and assistance services		928
25.2	Other services	[60]	990
25.3	Purchase of goods and services from government accounts	[48]	49
25.4	Operation and maintenance of facilities		
25.5	Research and development contracts		
25.6	Medical care		
25.7	Operation and maintenance of equipment		
25.8	Subsistence and support of persons		
26.0	Supplies and materials	[18]	18
31.0	Equipment	[18]	18
41.0	Grants, Subsidies and Contributions		
Total other objects		[246]	2,109
Total direct obligations		[2,499]	4,470

*Note: Fiscal year 1996 Data included in FPA appropriation.

RESEARCH AND EVALUATION

Question. Mr. Ludwig, you indicate in your prepared statement that \$20.183 million is requested in the Food Stamp, WIC and Child Nutrition appropriations for research studies and surveys to support a variety of policy initiatives and to respond to the oversight responsibilities of Congress.

Please provide for the record, a list of the research studies and surveys planned for fiscal year 1997, indicating the cost of each. Also, provide a list of the research studies

and surveys, including the cost of each, funded by the Food and Consumer Service in each of fiscal years 1995 and 1996.

Answer. The Agency is currently in the process of developing the research plan for fiscal year 1997. I will include for the record a list of the research studies and surveys already planned for fiscal year 1997. Since the procurement process has not yet taken place, the cost of these studies is currently unknown. Additional projects will be developed to conduct evaluations, demonstration projects, and nationally representative studies which provide information for policy decisions and improved program operations. Some of these studies will assess implementation of the Dietary Guidelines in the school meal programs and developing nutrition education programs. Others will continue to examine issues in nutrition security, integrating nutrition into the Food Stamp Program, enhancing program integrity and management; and modernizing benefit delivery systems.

In addition, if requested funds are appropriated for the food stamp research account, we plan to develop several projects to evaluate the effects of State experimentation and welfare reform legislation on the nutrition security of recipients. Such projects will be tailored to reflect the final shape of any welfare reform legislation currently unknown. Thus, while the details of these projects are not set at this time, we anticipate such projects would, at a minimum, address such issues as:

- The choices States make if given new authority and flexibility;
- The outcome of welfare reform proposals on the number and characteristics of program participants, program coverage, average and total benefits, food security and hunger, nutrition and health status, and other indicators of economic well-being;
- Research and methodological solutions needed to assess the outcomes and consequences of change; and
- The effects of simplified Food Stamp Program proposals.

I will include for the record a list of the research studies and surveys, including the cost of each, funded by the Food and Consumer Service in each of fiscal years 1995 and 1996. The Agency is currently in the process of releasing Requests for Proposals (RFPs) for studies and surveys to begin in Fiscal Year 1996. Because the Agency is in the early stages of procuring these studies, when negotiation has not yet occurred, dollar figures for most of these studies have yet to be determined.

For projects funded over multiple fiscal years, the Total Projected Cost and funds obligated for that fiscal year are reported separately. The Total Projected Cost reported includes funds for fiscal year indicated.

[The Information follows:]

PLANNED FOOD STAMP RESEARCH FOR FY 1997**Operations Improvement Studies**

As States move more aggressively to streamline program administration, the Food and Consumer Service needs to know the likely effects of their plans on program integrity and efficiency. This effort will provide a vehicle to conduct studies to address operational and management concerns related to changes, or potential changes, in basic program practices.

Total Projected Cost: To be determined

Center for Nutrition Education Evaluation

Plans for integrating nutrition into the Food Stamp Program will be strengthened by development of a center for nutrition education evaluation. This will fund a competitive cooperative agreement to an academic or other organization to support State and local programs.

Total Projected Cost: To be determined

PLANNED WIC RESEARCH FOR FY 1997

Some ongoing WIC research studies and surveys will receive fiscal year 1997 funds. The new research projects planned for fiscal year 1997 are the following:

WIC Analysis Projects

This contract will provide analytic support for emerging and ongoing WIC policy and budget issues, including modeling the impact of legislative changes on program eligibility, participation, and costs. The contract will use existing data to examine issues.

Total Projected Cost: To be determined

Study of WIC Participant and Program Characteristics, 1998

Public Laws 99-500 and 99-591 enacted in 1986 require that FCS submit to Congress a biennial report on WIC participant and program characteristics. This effort will collect information for fiscal year 1998 and fiscal year 2000. (Mandate)

Total Projected Cost: To be determined

WIC Participant Health Care Usage

This study would ask if WIC participants are receiving early and/or adequate health care as a result of WIC participation. Since the National Maternal and Infant Health Survey (NMIHS) has been postponed indefinitely, this study could incorporate relevant parts of the NMIHS. The NMIHS was a large scale survey of child-bearing women and their infants. This study could include participation patterns, health care usage, immunizations, child care, family composition, employment, health insurance, use of other Federal programs, and hospitalizations.

Total Projected Cost: To be determined

PLANNED CHILD NUTRITION RESEARCH FOR 1997

Some ongoing Child Nutrition research studies and surveys will receive fiscal year 1997 funds. The new research projects planned for fiscal year 1997 are the following:

Changes in Family Day Care Homes

This study would examine the effect of programmatic changes in CACFP affecting family day care homes (FDCHs). It will determine the number of homes participating, the types of children participating and the types of meals provided to the children. It will also address licensing issues associated with FDCHs.

Total Projected Cost: To be determined

Child Nutrition Analysis Project

This contract will provide analytic support for emerging and ongoing Child Nutrition policy and budget issues. The contract will use existing data to examine issues in the NSLP, SBP, CACFP, SFSP and Team Nutrition.

Total Projected Cost: To be determined

PLANNED FOOD STAMP RESEARCH FOR FY 1996

Authorized Food Retailer Characteristics Study

Because Food Stamp benefits can only be redeemed at authorized retailer, it is important to know whether authorized stores are accessible to participants and whether the price, variety, and quality of food is competitive. A representative sample of FCS authorized retailers was surveyed to collect information and other data on store characteristics related to EBT implementation. Community interviews collected information regarding recipients' access in five intensive areas. Existing data from the 1990 Census and FCS' retailer data bases are being analyzed and measures of geographic access have been computed. The study will provide information which will support the development of a model that can be used to determine the adequacy of retailer access. The collected information will also be used to support an analysis of EBT readiness among authorized retailers and potential changes in food stamp coupon management practices. An additional task statistically analyzes data collected during compliance investigations to update the Agency's violation-prone-profile (VPP). These activities will provide a new statistical targeting method for compliance investigations.

Total Projected Cost: \$1,384,265

FY 1996 Funds: \$49,635 (These funds support a contract modification to ensure sufficient funds to complete required work).

Options to the Food Access Follow-on Study

Funds three optional technical assistance tasks: a guidebook for communities, a toll-free 800 number, and assistance with implementation of food access initiatives.

Total Projected Cost: \$400,000
FY 1996 Funds: \$100,000 to exercise a contractual option.

Support for the Panel Study of Income Dynamics

The Panel Study of Income Dynamics is the Nation's premier longitudinal survey, tracking a group of American families--including a substantial number of low-income families--for over 27 years. Maintain this survey in the years ahead offers a unique opportunity to assess long-term consequences of welfare reform on family employment.

Total Projected Cost: \$100,000 Interagency Transfer to National Science Foundation

Nielsen Scantrack Data Purchase

This will transfer funds to the Economic Research Service to support their purchase of The Nielsen Scantrack data on behalf of USDA. The data consist of sales and volume of all the processed food products sold in retail stores with sales over \$2 million. The data are needed for the Rural Food Price Monitoring Feasibility study and are likely to have applicability to assessment of the Thrifty Food Plan as well.

Total Projected Cost: \$25,000 Transfer of funds

Demonstration/Evaluation of Food Retailer Monitoring Visits

FCS requested fiscal year 1997 funds for pre-authorization visits to food retailers. This will test alternatives during 1996 to guide full implementation.

Total Projected Cost: Demonstration - \$600,000
 Evaluation - To be determined

Team Nutrition Food Stamp Analytic Support

This would provide a vehicle to support the exploration of operational and effectiveness issues related to effects to strengthen the nutrition education component of the Food Stamp Program.

Total Projected Cost: To be determined

State Nutrition Support Networks

This will fund a second round of nutrition support networks. These networks -- organized around an emphasis on the Dietary Guidelines for Americans, reliance on community-based efforts, and innovative nutrition promotions -- are forming with the ultimate goal of reaching large numbers of program participants with information needed to help make food choices for a healthy diet.

Total Projected Cost: To be determined

Consumer-Based Applications for the Healthy Eating Index

In collaboration with the Center for Nutrition Policy and Promotion, this will develop, demonstrate and evaluate

consumer-based scales for use in food stamp nutrition education.

Total Projected Cost: To be determined

Tools and Data Sources for Nutrition Education Evaluation

A competitive grant program to test instruments to evaluate nutrition education in the Food Stamp Program and explore ways to improve the data sources to analyze and measure nutritional status and dietary intake.

Total Projected Cost: To be determined

Early Childhood Longitudinal Study

The National Center for Educational Statistics will collect data on early learning experiences from 23,000 kindergarten children. This will transfer funds to add a battery of questions to measure the food security of children and their families. The study will also provide a unique opportunity to examine nutritional status to cognitive performance as well as links of participation in food stamps and school nutrition programs to learning.

Total Projected Cost: To be determined

Microsimulation

Microsimulation provides FCS with the technical capability needed to answer Congressional questions and estimate the impact of proposed changes to the FSP.

Total Projected Cost: To be determined

April 1997 Food Security Data Collection

This will enable continuation of the Food Security Supplement to the Current Population Survey conducted by the Bureau of the Census.

Total Projected Cost: To be determined

Support for the Continuing Survey of Food Intake by Individuals

This survey is the most applicable general database for addressing food consumption issues among low-income persons. This item reserves funds to partially support the survey if normal funding is inadequate and/or add special questions (such as the food security supplement or others) of value to the Food Stamp Program.

Total Projected Cost: To be determined

Food Stamp Program Participation, Dietary Knowledge, and Dietary Intake

This project would model the effects of program participation and dietary knowledge on dietary intake.

Total Projected Cost: To be determined

Nutrition and Health Impacts of Household Food Sufficiency

This will link CPS-based food security measures with the National Health and Nutrition Examination Survey to examine the impact of household food-sufficiency conditions on the nutritional and health status of low-income households, particularly young children and elderly.

Total Projected Cost: To be determined

Impacts of Household Resource Constraints on Food Sufficiency

This study will analyze Survey of Income and Program Participation to examine the links between household food sufficiency and the overall economic well-being of low-income households, particularly those with children, elderly, and the working poor.

Total Projected Cost: To be determined

Validation of Food Expenditure Measures

This will assess the validity of the new CPS-based food spending data against established Consumer Expenditure Survey food expenditures.

Total Projected Cost: To be determined

Tracking Nutrition Security Changes: State Choices and the Shape of the National Food Stamp Program

Proposed legislation gives States substantial flexibility that will change the shape of the Food Stamp Program. A critical first step in assessing the consequences of the changes is to describe them fully and completely. The effort will produce a document and database that shall provide centralized information on current practices.

Total Projected Cost: To be determined

Guiding Nutrition Security Changes: Simplified Program Technical Assistance

Proposed legislation will allow States to create a simplified Food Stamp Program. This will provide technical assistance to (a) States developing a simplified program (so they understand the effect of choices before they submit a proposal to FCS) and (b) the FCS (for assessing the cost neutrality of simplified program proposals).

Total Projected Cost: To be determined

Grants to 1890 Land Grant Institutions

This is the second year the Agency has sponsored a program of small grants to 1890 Land Grant Institutions (1890s) to complement and extend FCS' main research agenda. The intent is to encourage a wide range of independent scholarly thinking on the basic program, policy, and research issues currently or potentially facing the Food Stamp Program. Obtaining the research perspective of members of this community is an important part of understanding the Food Stamp Program.

Total Projected Cost: To be determined

Small Grants for Analytic Research on Hunger and Poverty

For many years the Agency has sponsored a program of small grants to foster a wide range of independent scholarly thinking on basic program and research issues facing the Food Stamp Program. This program has supported small-scale research on topics such as the impact of food stamps on maternal and child health, the economic mobility of young workers, the role of food stamps for single mothers combining work and AFDC, microsimulation modelling of food stamp-EITC interactions, and many others. In 1994, this program was merged with, and FCS-funded grants were awarded through, the similar small-grant competition sponsored jointly by the Department of Health and Human Services and the Institute for Research on Poverty at the University of Wisconsin.

Total Projected Cost: To be determined

Assessment of Biometrics, Finger Imaging and Related Anti-fraud Tools

New technology may make detection of fraud more feasible. Yet questions remain about accuracy, compatibility of different systems across state lines, and cost-effectiveness. This will survey existing projects (to assess compatibility), assess the cost effectiveness of finger imaging, assess the feasibility of catching duplicate participation across state lines, and develop effective techniques to share information with IRS and other agencies.

Total Projected Cost: To be determined

Management Models and Technical Assistance for the Food Stamp Program

To comply with the Government Performance and Results Act, FCS is determining performance measures for the Food Stamp Program. The measures will involve major adjustments and new ways of working among HQ, regions, and states. This will pick a few key areas and assess sustainability of measurement systems employed, impacts on worker time and resources, provide technical assistance to FCS and states, and recommend ways to use the measures to improve program operations at the front lines.

Total Projected Cost: To be determined

Feasibility Study of Capturing Food Data at Checkout

While it is technically possible to link transaction data with scanner data at checkout, doing so has not been tested in practice. This project will identify a small sample of EBT retailers willing to test the feasibility of making a linkage, equip those stores with hardware and software, and analyze the resulting data. All analyses will be aggregated by demographics or store type aggregate variables (to eliminate privacy concerns). In addition to analysis of the food purchasing behavior of food stamp participants, the goal will be to determine the feasibility and cost of implementing a

national monitoring system of food stamp participant shopping behavior.

Total Projected Cost: To be determined

Feasibility of Standards for EBT Equipage of Farmers' Markets and Mobile Retailers

The 1994 pilot of cellular technology in the Baltimore Farmers' Market generated widespread enthusiasm among retailers and program participants. It extended EBT to non-stationary retailers, increased access to fresh produce for participants, and expanded states' and FCS' ability to track potential fraud and abuse. The technology used in Baltimore, however, was cumbersome and costly. New technologies exist that could reduce the cost of electronic transactions for non-stationary vendors. The purpose of this study is to inventory available technologies and determine the feasibility of developing compatible software and equipment to apply up-to-date technology to farmers' markets and other mobile retailers.

Total Projected Cost: To be determined

PLANNED WIC RESEARCH FOR FY 1996

WIC Modeling and Analytic Projects II (MAP II)

The policy objective of MAP is to analyze existing data to answer policy relevant research questions on topics including: nutritional and medical risk analyses; institutional characteristics and practice of WIC agencies; participant characteristics and dynamics of participation; and, comparative analyses of WIC participants and nonparticipants.

The MAP project uses data from various sources including: WIC Program and Participant Characteristics 1992 and 1994; the 1988 National Maternal and Infant Health Survey; the National Health and Nutrition Examination Survey (1988-1990); the Current Population Survey; and, the Survey of Income and Program Participation. MAP includes an Ad Hoc component for responding to analytic needs that arise during the course of the contract.

Total Projected Cost: \$1,200,000

Iron Deficiency Anemia among WIC Children Pilot Project

FCS and the Centers for Disease Control and Prevention (CDC) conducted a joint pilot project to investigate the reasons for the high reported rates of anemia among children participating in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in selected high prevalence communities in Georgia and Alabama. The purpose of the project was to investigate communities with a high reported prevalence of anemia, in order to determine how much of the problem is attributable to laboratory procedures, reporting procedures, and true iron deficiency anemia; to define and pilot test procedures that readily distinguish between locations with excessive rates of true iron deficiency anemia, and those with other technical or reporting problems.

An interim report was received in February 1996.

Total Projected Cost: \$50,000

Study of WIC Participant and Program Characteristics, 1996

As mandated by Public Laws 99-591 and 99-500, biennially report to Congress on characteristics of WIC Program participants in the areas of income, nutritional risks, migrant status, and other attributes of WIC participants the Secretary considers appropriate. Biennially, beginning in 1992, all State WIC Agencies are required to provide a Minimum Data Set of 18 variables from their management information systems to FCS for the Congressional Report. The April 1996 data collection will include a local agency survey of a representative sample of WIC local agencies. The survey will elicit information about local agency operating features.

Total Projected Cost: \$522,185

Characteristics of WIC Participants and Local Agencies

The Agency routinely collects certain limited information on WIC programs and participants. However, there is a growing need for nationally representative information on participants and local programs that is not included in the current data collections. This study will provide systematic information on program participant incomes, compared to income eligibility standards and will determine the magnitude of misreporting.

Total Projected Cost: To be determined.

Measuring Program Impact and Dietary Intake

Over the past 10 to 20 years significant changes have occurred in American society that make it increasingly difficult to determine children's dietary intake. This project would explore new approaches to obtaining dietary intake from young children.

Total Projected Cost: To be determined.

WIC Vendor Criteria - WIC food costs vary tremendously across states. One of several factors affecting this occurrence is vendor selection and authorization. This study will examine whether vendor selection and authorization criteria reduce the average food package costs, reduce vendor management costs by having a smaller, more reliable universe of authorized vendors, and have an impact on program access for participants. The study will also estimate vendor abuse and examine the linkage between vendor management and vendor abuse.

Total Projected Cost: To be determined.

PLANNED CHILD NUTRITION RESEARCH FOR FY 1996

Special Nutrition Analysis and Modeling

This contract provides quick response capability for the Child Nutrition Programs in answering questions posed by legislators or policy makers. This contract is used for many purposes, including responding to reauthorization questions and providing

cost estimates. Analyses presently focus on characteristics of program eligibles; characteristics of program participants and institutions that administer programs; and the effect of child care expansion legislation. The analyses use existing data available from national studies, demonstrations or special projects.

Total Projected Cost: \$929,000

Geomapping Study

This study will investigate the feasibility of using geomapping as a method of examining the delivery of Food and Consumer Service (FCS) food assistance program benefits to children in rural areas. The objectives of this study are to: (1) identify and map the areas of the U.S. in which children who are at or below 130% and 185% of poverty reside; (2) identify and resolve the practical problems associated with use of geomapping to examine food assistance program access to children; and (3) use geomapping to identify and examine variables which affect access of children to food assistance programs.

Total Projected Cost: \$430,819

Centers for Disease Control and Prevention (CDC)/FCS MOU for School Based Nutrition Monitoring

As a result of the recommendation in the 10 year plan of the National Nutrition Monitoring and Related Research Committee that a school based nutrition monitoring was needed, FCS developed a MOU with the CDC. The CDC transferred funds from both agencies to the Prevention Center at the University of Texas at Houston to test the potential design for a school Based Nutrition Monitoring system.

Total Projected Cost: \$100,000

School Meals Initiative for Healthy Children Implementation

As SFAs begin implementing the School Meals Initiative for Healthy Children and Team Nutrition activities are implemented in schools, this mechanism will collect data from SFAs for policy and programmatic decision-making. The study will collect data annually from a nationally representative sample of SFAs on issues that are the focus of FCS' policy making process.

Total Projected Cost: To be determined.

Needs Assessment for Team Nutrition

Information from prior research indicates that educators receive various materials to assist them in teaching nutrition to school children. Team Nutrition has attempted to fill the gaps in the materials available to those associated with educating children. This project will survey teachers and/or other educators to determine what other assistance they wish in teaching nutrition and health promotion to students.

Total Projected Cost: To be determined.

Early Childhood Longitudinal Study

The National Center for Educational Statistics (NCES) will collect data on early learning experiences from 23,000 kindergarten children. FCS will transfer funds to NCES to support completion of a food sufficiency module by parents/guardians. The study will also provide a unique opportunity to examine nutritional status to cognitive performance as well as links of participation in school nutrition programs to learning.

Total Projected Cost: To be determined.

Commercialization of School Food Service

This study will obtain information about SFA use of commercial restaurants (e.g., Pizza Hut, Taco Bell) and branded products; the nutritional quality of the meals offered; and, how student participation is affected by the use of these products.

Total Projected Cost: To be determined.

Monitoring Implementation of the Dietary Guidelines

The Food and Consumer Service (FCS) is committed to providing children with school meals that comply with the current recommendations of the Dietary Guidelines for Americans. As school food authorities begin implementing the School Meals Initiative for Healthy Children, it is imperative that FCS have a mechanism in place to monitor the progress these SFAs are making toward this goal. The Agency is seeking new, innovative alternatives to monitor the implementation of the Dietary Guidelines that would be less complex, reduce costs and decrease burden. This procurement requests a review of current literature and the development of a report that provides alternatives to the current monitoring practices.

Total Projected Cost: To be determined.

Profile of Summer Food Service Program

This project will provide a national description of SFSP participating sponsors, providers (public and private) and program recipients. It will also provide information on the nutritional quality of meals offered by program providers.

Total Projected Cost: To be determined.

FOOD STAMP RESEARCH FOR FY 1995

The National Survey of Food Stamp Recipients and Eligibles

In response to the National Performance Review's call for customer surveys, this study is conducting the first nationally representative survey of Food Stamp Program recipients. Data will be collected to understand recipients' needs and views on customer service, food security and access to stores, and benefit structure. A two-stage, cluster random probability sample will be chosen to include 2,400 food stamp households. Data collection protocols will be developed and pre-tested. A telephone screener interview will be followed by an in-person interview with a qualified respondent. A descriptive analysis

of survey data will be performed. Econometric modelling will be used to quantify relationships between food security, dietary adequacy, and access to stores.

Total Projected Cost: \$2,322,396
FY 1995 Funds: \$349,271

Evaluation of the Application of Regulation E to EBT Systems

The purpose of this study is to assess the outcomes associated with the actual implementation of Regulation E in five different demonstrations sites. Study results will include estimates of Regulation E costs under different scenarios, measures of client satisfaction and a comparative description of operational procedures and lessons learned. Findings will be used to inform the required extension of Regulation E to EBT systems by 1997. A preliminary report on Regulation E costs will be produced Spring 1996.

Total Projected Cost: \$1,218,658

Evaluation of the Ohio Expanded Food Stamp Off-line EBT Demonstration

This is an evaluation of the feasibility and cost impacts of the expansion of the food stamp off-line (smart card) EBT demonstration in Ohio. The objective is to evaluate the demonstration of an off-line EBT system in Ohio by testing the technical feasibility of operating the off-line system on a large scale and by assessing the economies of scale associated with the operation of the system to determine administrative cost impacts. Data collection and analysis will be done over the course of the next several years while the State of Ohio expands its off-line EBT pilot demonstration project statewide.

Total Projected Cost: \$712,529
FY 1995 Funds: \$71,423

Demonstration and Evaluation of Resource Accumulation for Food Stamp Recipients

The Mickey Leland Childhood Hunger Relief Act allows households already receiving food stamp benefits to accumulate up to \$10,000 in resources and remain eligible for program participation. An evaluation contract was awarded to describe and compare procedures for implementing the Leland assets accumulation provision. Local sites were recruited to implement this. Only one demonstration proposal was submitted and that did not meet the criteria established by USDA. Consequently, the Department is now pursuing a descriptive study of all State welfare reform initiatives to relax asset requirements. To the extent States are collecting data on policy impacts, these findings will be reported along with a systematic description of specific policy changes.

Total Projected Cost: \$400,000

Parents' Fair Share Demonstration

A national study to determine the impact of providing employment and training services and peer group support to unemployed, noncustodial parents of children receiving AFDC.

FCS is joining with AFDC to learn about effective employment and training programs for noncustodial parents since the Food Stamp Program is one of the few for which they are eligible. An experimental design will be used and noncustodial parents will be assigned to Parents' Fair Share treatment groups and control groups in each site. Data collection will include a survey of custodial parents, focus groups with noncustodial parents, ethnographic research and record reviews of AFDC, Food Stamp Program, unemployment insurance earnings, child support, and Job Training Partnership Act Program data.

Total Projected Cost: \$1,000,000 (FCS share only)

FY95 Funding: \$800,000

Barriers to Good Nutrition

The purpose of this project is to identify possible barriers to good nutrition in order to develop educational intervention strategies based on research findings. The study analyzed existing data on food expenditure, food and nutrient consumption, and attitudes and knowledge regarding food of low-income households or individuals in those households. Focus groups were conducted to research the attitudes, beliefs, and perceptions of Food Stamp Program participants as they relate to shopping behavior, food preferences and choices, eating patterns, and cooking behavior.

Total Projected Cost: \$524,757

FY95 Funds: \$25,000

Conference on Access to Food

The Food and Consumer Service is interested in improving access to nutritious, affordable food in underserved urban and rural communities. Providing access to food can be an integral part of economic and community development. Food store development can result in job creation, residents sharing ownership of businesses through community development corporations and inflows of revenue to communities. This conference brought together business owners, residents, practitioners, researchers and government officials to present and discuss successful strategies for developing full-line food stores and alternatives such as farmers' markets and transportation options.

Total Projected Cost: \$118,000

FY95 Fund=: \$7,370

SSI Joint Processing

The study will evaluate demonstration projects testing the effects of alternatives to current Food Stamp Program regulations governing the operation of a joint SSI/Food Stamp processing system for elderly and disabled individuals. The evaluation will provide information on how the demonstration changes affect participation, benefits, administrative costs, timeliness and accuracy of application processing, and client satisfaction.

Total Projected Cost: \$452,880

Food Store Access Study

The major concern of FCS is to assure the effectiveness of the assistance provided through the Food Stamp Program. One aspect of program effectiveness is the accessibility of affordable food stores and markets to participants. The purpose of the study is to 1) identify and assess food access strategies which have already been planned or implemented by local communities and 2) provide technical assistance to communities that have identified food access as a problem, but do not have the information and/or resources needed to proceed.

Total Projected Cost: \$300,000

Valuing the Benefits of Access to Stores

Interagency transfer of funds to the Economic Research Service to support development of measures to value the benefits that food stamp program participants receive from access to authorized food stores.

Total Projected Cost: \$48,159

Technical Assistance and Evaluation for the Nutrition Education Cooperative Agreement

To provide partnership development expertise to support States in planning and developing a statewide nutrition education and promotion network, to conduct an evaluation of the collaborative process, and to prepare a summary report synthesizing the results of all the projects.

Total Projected Cost: \$486,907

Dynamics of Food Stamp Participation

This study will update our knowledge of food stamp participation dynamics, including events leading to food stamp receipt, duration of participation spells, types of exits from the program, and recidivism. The research consists of three types of analyses: an entry cohort analysis, a cross-sectional cohort analysis, and an analysis of changes in participation dynamics over time. The data set will be drawn from the 1990 and 1991 Survey of Income and Program Participation (SIPP) panels.

Total Projected Cost: \$347,997

Nutrition and Health Status of Low-Income Persons

This study focuses on the relationship of poverty to nutrition and health status. This will be accomplished by conducting an in-depth review of existing knowledge and supplementing this with new analyses of data on the relationship of poverty to nutrition security and health status. It differs from and extends previous research which has focused on a single program and its contribution to health and nutritional status or has used a public health issue as its principle orientation.

Total Projected Cost: \$295,283

Garden Project

San Francisco's Garden Project has grown from a small community garden created for former San Francisco County Jail prisoners to a nationally recognized model for crime prevention and building self-esteem. As part of the urban gardening movement it is also an example of an alternative source of access to food in underserved areas. This project will (a) evaluate the success of the model (number of people served, characteristics of participants, number of food stamp recipients, etc.) and (b) provide technical assistance to develop a guidebook based on the Garden Project to show other communities how to implement similar efforts.

Total Projected Cost: \$46,310

Rural Food Prices

The Bureau of Labor Statistics collects data on food prices in 85 geographic areas which can be used to monitor trends over time for the nation as well as for 44 metropolitan areas. The purpose of this project would be to conduct a feasibility study, in cooperation with Bureau of Labor Statistics, on collecting equivalent data in rural underserved areas in order to develop a national monitoring system on trends in food prices.

Total Projected Cost: \$132,293

Getting More Mileage from Research

This project will enhance the Agency's capacity to use available research tools. With the press of limited time and dollars, it is easy to rely on the usual tools--e.g., focus groups for detailed, specific reactions from recipients; percentage comparisons to distinguish characteristics of those who do versus those who don't respond to some policy change; econometric analyses to establish explanatory relationships in experimental designs. On most occasions the approach is appropriate but could be applied more authoritatively--e.g., minimal model testing or validation in econometric analyses of nonexperimental data. On some occasions the technical approach used may not be the most appropriate--e.g., percentage comparisons across a series of variables instead of multivariate profile analyses. Four tasks have been awarded to date.

Total Projected Cost: \$360,000

South Carolina Recipient Integrity Demonstration Evaluation

The goal of the South Carolina EBT Retailer/Client Program Integrity Project is to establish cases of misuse for clients who are trafficking in food stamp benefits and to impose penalties of disqualification from program participation for those clients found to be guilty of misuse. The project will also assist FCS in identifying and disqualifying authorized retailers who can be linked to these transactions. An evaluation of these activities will assist FCS in determining whether State agency capabilities to perform these activities in connection with the implementation of EBT systems is an effective administrative alternative. This evaluation will also attempt to provide cost estimates for these activities and

to evaluate the transferability of these practices to other States with EBT.

Total Projected Cost: \$350,000

Retailer Database Demonstration

This project evaluated the feasibility of working with an independent retailer monitoring service to determine the potential usefulness of the information they can provide on authorized retailers. This information may be useful during authorization, reauthorization and compliance activities.

Total Projected Cost: \$23,025

Grants for Interactive Nutrition Education and Promotion

To demonstrate and evaluate innovative, interactive approaches for providing nutrition education and promotion to Food Stamp Program participants and other low-income individuals and families.

Total Projected Cost: \$878,000

Grants to 1890 Land Grant Institutions

The purpose of the program of grants to 1890 Land Grant Institutions (1890s) is to complement and extend FCS' main research agenda. The intent is to encourage a wide range of independent scholarly thinking on the basic program, policy, and research issues currently or potentially facing the Food Stamp Program. Obtaining the research perspective of members of this community is an important part of understanding the Food Stamp Program.

Total Projected Cost: \$138,132

Food Security Measurement Project

FCS has provided leadership in coordinating development of new tools for measuring the prevalence and severity of food insecurity and poverty-linked hunger in the U.S. population. One key step in this process was development of a standardized national survey instrument for collecting basic data on food insecurity and hunger in U.S. households, as these concepts have evolved into widely accepted definitions within the scientific and food-policy communities in recent years. The first such data collection was made for FCS by the Census Bureau as a special Supplement to the April 1995 Current Population Survey. The present project provides for analyzing the new CPS Supplement data, developing a state-of-the-art measurement scale for food insecurity and hunger from the data, and estimating the population prevalence of food insecurity and hunger, at several levels of severity, based on the new measures.

Total Projected Cost: \$447,059

Small Grants for Analytic Research on Hunger and Poverty

For many years the Agency has sponsored a program of small grants to foster a wide range of independent scholarly thinking

on basic program and research issues facing the Food Stamp Program. This program has supported small-scale research on topics such as the impact of food stamps on maternal and child health, the economic mobility of young workers, the role of food stamps for single mothers combining work and AFDC, microsimulation modelling of food stamp-EITC interactions, and many others. In 1994, this program was merged with, and FCS-funded grants were awarded through, the similar small-grant competition sponsored jointly by the Department of Health and Human Services and the Institute for Research on Poverty at the University of Wisconsin.

Total Projected Cost: \$376,873

Survey of Program Dynamics

FCS uses data from the Census Bureau's Survey of Income and Program Participation to analyze the dynamics of food assistance program participation in relation to changes in income, marital status, labor patterns and other demographic variables. This supports the Bureau's proposed extension of the 1993 SIPP Panel with the particular goal of including data on food security and nutrition. The study will provide panel data showing dynamic changes in program participation for welfare, health, education, and employment/training programs for 1993-2002; and changes in employment, income and poverty, family structure and process, and children's well-being and outcomes. The study will assess welfare reform, health care reform, and education, employment and training programs. The causes and consequences of program participation will also be analyzed.

Total Projected Cost: \$400,000 (FCS share)

FY95 Funds: \$100,000

Microsimulation and Related Analyses

This contract provides support for estimating effects of potential program changes, for short-turnaround analyses of current issues, for periodic analysis of participation and household characteristics, and for research needed to improve future analytic capacities. Impact analyses done under the contract support many FCS legislative and budgetary proposals every year. Other organizations, such as the Congressional Budget Office, community organizations, and private research firms, rely on the regular publication of analytical and descriptive studies produced under this contract to support their own analyses of the Food Stamp Program.

Total Projected Cost: \$4,225,649

FY95 Funds: \$817,003

Reaching the Elderly and Working Poor

The purpose of this study is to gain a better understanding of the reasons behind the lower-than-average participation rates of the elderly and working poor. The project consists of three phases: (1) analyze existing data to investigate reasons for nonparticipation that can be gleaned from current data sets; (2) conduct focus groups with participating and nonparticipating eligible elderly and working poor to explore reasons for nonparticipation in detail; and (3) design

questionnaires on nonparticipation issues, perform cognitive testing of draft questionnaires, and conduct a pretest of the questionnaires. A final report will summarize these phases and present study findings.

Total Projected Cost: \$790,977

SSI Combined Access Demonstration

This transfer of funds to the Social Security Administration supported a demonstration of client assistance for Food Stamp enrollment for individuals targeted for SSI outreach.

Total Projected Cost: \$344,233 Interagency Transfer

Homeless Survey

This transfer of funds to the Bureau of the Census supported the National Survey of Homeless Service Providers and Clients.

Total Projected Cost: \$200,000

Nutrition Database Acquisition

This project provided funds to acquire a Nutrition Database that could be used in further development and fine tuning of the Healthy Eating Index.

Total Projected Cost: \$250,000

Food Store Access Study

The major concern of FCS is to assure the effectiveness of the assistance provided through the Food Stamp Program. One aspect of program effectiveness is the accessibility of affordable food stores and markets to participants. The purpose of the study is to 1) identify and assess food access strategies which have already been planned or implemented by local communities and 2) provide technical assistance to communities that have identified food access as a problem, but do not have the information and/or resources needed to proceed.

Total Projected Cost: \$300,000

WIC RESEARCH FOR FY 1995

WIC Modeling and Analytic Projects II (MAP II)

The policy objective of MAP is to analyze existing data to answer policy relevant research questions on topics including: nutritional and medical risk analyses; institutional characteristics and practice of WIC agencies; participant characteristics and dynamics of participation; and, comparative analyses of WIC participants and nonparticipants.

The MAP project uses data from various sources including: WIC Program and Participant Characteristics 1992 and 1994; the 1988 National Maternal and Infant Health Survey; the National Health and Nutrition Survey (1988-1990); the Current Population

Survey; and, the Survey of Income and Program Participation. MAP includes an Ad Hoc component for responding to analytic needs that arise during the course of the contract.

Total Projected Cost: \$1,200,000

WIC EBT Demonstration Evaluation

This project studies the first WIC and Food Stamp Program (WIC/FSP) integrated Electronic Benefit Transfer (EBT) system in Wyoming. Data collection focuses on feasibility, start-up and early operations costs, and stakeholder impact issues in the use of smart cards. Analyses include an assessment of the technical and cost feasibility of integrated WIC/FSP systems in larger environments. This project is partially funded with FSP research funds.

Total Projected Cost: \$988,864

WIC and Emerging Technology

This project focuses on potential use of blood sensing technology which may eventually measure blood iron levels without performing invasive blood tests. Infrared rays are being explored by industry for use in measuring blood glucose levels for diabetics. WIC research would assess the technology for eventual use in WIC clinics.

Total Projected Cost: \$200,000

WIC Nutrition Education Demonstration Study

Nutrition education is one of the basic services provided to WIC participants. The demonstration study tests the effectiveness of three innovative WIC nutrition education programs. The innovations are touch screen videos, group facilitation processes and Kids Club.

The demonstration study addresses costs as well as effectiveness. The goal is to identify more effective and less costly techniques of providing nutrition education. The study focuses on nutrition education for pregnant women and children.

Total Projected Cost: \$1,563,488

WIC Food Purchasing Study

WIC participants receive vouchers or food instruments prescribing specific types and quantities of foods. While FCS collects data on the aggregate dollar value of food instruments that are redeemed, it does not have access to data on the types of foods which have been redeemed. This study examines which foods are prescribed, which are redeemed, and in what quantities, and which are not. UPC scanner code data obtained at check-out from food retailers is being used to examine recipient food purchasing patterns. If there is a consistent pattern in foods that are unredeemed, the program may want to change the prescription in favor of other foods that contain the necessary nutrients. Further, knowledge of food purchasing patterns will help the WIC Program to improve program management and cost containment efforts.

Total Projected Cost: \$649,830

Community Nutrition Education Demonstration and Evaluation

To further its goal to integrate nutrition into the food assistance programs, FCS entered into cooperative agreements with 10 community-based nutrition education consortia to develop, conduct and evaluate demonstration nutrition education projects. The partnership projects focus on providing nutrition education to participants in the food assistance programs, especially families with young children. The goals are to support the design, implementation and evaluation of nutrition education programs that reach large numbers of food assistance program recipients; to foster the development of community networks to better integrate nutrition education service and resources; and, to provide integrated nutrition education outside of traditional program-centered delivery systems. This demonstration uses Food Stamp Program, Child Nutrition, and WIC funds.

Total Projected Cost: Grants-\$2,000,000; Evaluation-\$500,000

Iron Deficiency Anemia among WIC Children Pilot Project

FCS and the Centers for Disease Control and Prevention (CDC) conducted a joint pilot project to investigate the reasons for the high reported rates of anemia among children participating in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in selected high prevalence communities in Georgia and Alabama. The purpose of the project was to investigate communities with a high reported prevalence of anemia, in order to determine how much of the problem is attributable to laboratory procedures, reporting procedures, and true iron deficiency anemia; to define and pilot test procedures that readily distinguish between locations with excessive rates of true iron deficiency anemia, and those with other technical or reporting problems.

An interim report was received in February 1996.

Total Projected Cost: \$50,000

Needs Assessment of Adolescent WIC Participants

Local health services may not always reach the population intended, especially if there is a subpopulation that requires special attention. A subpopulation such as pregnant teens or adolescent mothers may have needs that differ from most of the main population of clients. If public health providers and policy makers are aware of the specific needs that low-income pregnant teens and adolescent mothers have, services may be made more effective in reaching this group. The Needs Assessment of Adolescent WIC Participants project will identify needs of adolescent WIC participants and describe the participation and childbearing patterns of WIC adolescents.

Total Projected Cost: \$865,051

Study of WIC Participant and Program Characteristics, 1996

As mandated by Public Laws 99-591 and 99-500, FCS must biennially report to Congress on characteristics of WIC Program participants in the areas of income, nutritional risks, migrant status, and other attributes of WIC participants the Secretary considers appropriate. Biennially, beginning in 1992, all

State WIC Agencies are required to provide a Minimum Data Set of 18 variables from their management information systems to FCS for the Congressional Report. The April 1996 data collection will include a local agency survey of a representative sample of WIC local agencies. The survey will elicit information about local agency operating features.

Total Projected Cost: \$522,185

WIC Interactive Video Enhancements Contract

The New England Technology Group (NETG) developed interactive video software expressly for use by WIC as a method of nutrition instruction. This contract supported two enhancements to existing software. First, NETG designed and produced a new topic module, entitled "Nutrition in Pregnancy," that is fully integrated into the existing software package. Second, NETG redesigned an existing module on breastfeeding. FCS is currently evaluating NETG software in the WIC Nutrition Education Demonstration Study.

Total Projected Cost: \$103,000

CHILD NUTRITION RESEARCH FOR FY 1995

Special Nutrition Analysis and Modeling

This contract provides quick response capability for the Child Nutrition Programs in answering programmatic questions and is used for many purposes, including responding to reauthorization questions and providing cost estimates. Analyses presently focus on characteristics of program eligibles; characteristics of program participants and institutions that administer programs; and the effect of child care expansion legislation. The analyses use existing data available from national studies, demonstrations or special projects.

Total Projected Cost: \$929,000

Nutrient Standard Menu Planning Demonstration Evaluation

The Department is currently conducting a demonstration project testing an alternative to the traditional meal pattern established in program regulations. This alternative, Nutrient Standard Menu Planning (NSMP), requires school meals served during a particular menu cycle to meet the specific standards for school lunches of one-third of the RDA for specific nutrients, one-fourth RDA goal for school breakfasts as well as implementing the Dietary Guidelines for Americans. Approximately 30 School Food Authorities began participating in the 3-year Nutrient Standard Menu Planning Demonstration in School Year 1994-95.

The study includes a process evaluation conducted in the initial demonstration years to document how well the operational procedures were implemented, assess the time and resources required to initiate NSMP, identify the types of problems encountered by foodservice staff and examine the solutions to these problems. The study also includes a summative evaluation which will assess the impacts of NSMP on the nutrient composition of meals offered, food service costs, and school foodservice operations by comparing various aspects

of the food service operation prior to and after implementation of NSMP.

Total Projected Cost: \$1,420,120

School Food Purchase Study

This study will produce national estimates of the type, volume and costs of foods purchased directly by school districts participating in the National School Lunch Program and School Breakfast Program, as well as the relative importance of foods donated by USDA. This study will also examine the nature of food procurement practices used in school districts and the relationship of these practices to food prices. School Food Authorities will distinguish between food items purchased for a la carte sales only and food items purchased for reimbursable meals.

Total Projected Cost: \$1,031,271

Nutrition Education in Schools

The Nutrition Education in Schools study surveyed the availability of nutritional education in schools for students. The goal of the project was to determine what programs, services and activities are available. With this information the Food and Consumer Service can identify gaps in nutrition education currently available and determine where additional efforts may be needed.

Total Projected Cost: \$135,000

Geomapping Study

This study will investigate the feasibility of using geomapping as a method of examining the delivery of Food and Consumer Service (FCS) food assistance program benefits to children in rural areas. The objectives of this study are to: (1) identify and map the areas of the U.S. in which children who are at or below 130% and 185% of poverty reside; (2) identify and resolve the practical problems associated with use of geomapping to examine food assistance program access to children; and (3) use geomapping to identify and examine variables which affect access of children to food assistance programs.

Total Projected Cost: \$430,819

Implementation of Nutrition Objectives for School Meals

This study will provide the Food and Consumer Service with an assessment of the nutrient composition of meals offered in the National School Lunch Program (NSLP) and the School Breakfast Program (SBP). Data obtained from a nationally representative sample of public schools in School Year 1997-98 will be used to determine the progress that School Food Authorities have made in implementing the 1990 Dietary Guidelines. Data on the nutrient content of meals offered in the NSLP and SBP will be compared to similar data obtained previously in the School Nutrition Dietary Assessment Study for School Year 1991-92.

Total Projected Cost: \$893,621

Study of Direct Certification

The purpose of this study is to: describe the use of direct certification (DC) programs nationwide from a statewide and local perspective; estimate the costs and administrative savings of using DC; assess DC's impact on certification and participation rates of students eligible for free meals; and identify factors that contribute to successful DC efforts. The study will collect data from fifty State Child Nutrition Directors, a nationally representative sample of school districts, and a purposively selected sample of participating Food Stamp and/or Aid to Families with Dependent Children agencies.

Total Projected Cost: \$414,841

Centers for Disease Control and Prevention (CDC)/FCS MOU for School Based Nutrition Monitoring

As a result of the recommendation in the 10 year plan of the National Nutrition Monitoring and Related Research Committee that a school based nutrition monitoring was needed, FCS developed a MOU with the CDC. The CDC transferred funds from both agencies to the Prevention Center at the University of Texas at Houston to test the potential design for a school Based Nutrition Monitoring system.

Total Projected Cost: \$100,000

COMPUTER ACQUISITIONS

Question. The budget includes a request for \$3 million in the food program administration account for automated data processing infrastructure acquisition. In the Senate report accompanying the fiscal year 1996 Agriculture Appropriations Act, this Committee at year provided several expectations relating to reengineering business processes, addressing other oversight concerns, and implementing a Department-wide information systems technology architecture. Each of these were to be completed prior to USDA acquiring new technology. Did the Food and Consumer Service acquire any new computer hardware during fiscal year 1996?

Answer. Other than incidental purchases, the Food and Consumer Service has not purchased any computer hardware in fiscal year 1996. The Agency has, however, purchased microcomputer desk-top operating system software and office automation software for those workstations that have the minimum processing capabilities required to run the new software.

Question. Are there other computer acquisitions proposed during FY 97 other than the \$3 million purchase proposed under food program administration?

Answer. There are no other computer acquisitions planned outside the proposed \$3 million requested in the fiscal year 1997 budget.

Question. For purchases made in FY 96 or proposed for FY 97 prior to completing the expectations set by this Committee, what specific circumstances existed or will exist that requires the Department to make the acquisitions prior to completing

reengineering, addressing oversight concerns, and developing a Department-wide architecture?

Answer. The expectations regarding reengineering, oversight concerns, and a Department-wide architecture raised in the Senate report accompanying the fiscal year 1996 Agriculture Appropriations Act were related to InfoShare. The report language correctly notes that InfoShare is "the Department's project to integrate information systems and business processes to improve service delivery to customers of farm service and rural development agencies". InfoShare is not related to the Food and Consumer Service's internal modernization of its information technology infrastructure, for which \$3 million has been requested in the fiscal year 1997 budget request. Moreover, we have received Technical Approval from the Department for this initiative, which assures that our plans do not conflict with or negatively impact the Department's larger architecture plans.

Question. What will the proposed \$3 million be used to purchase?

Answer. The Food and Consumer Service has begun the evolution to a modern desktop computing infrastructure. The Agency has requested \$3 million in fiscal year 1997 to continue this modernization. Details on the manner in which these funds will be used, is provided for the record:

Purchase 650 general-use microcomputers	-	\$1,820,000
Purchase software for 650 microcomputers	-	\$ 195,000
Purchase file servers	-	\$ 210,000
Purchase specialized application software,- e.g., forms design and remote computing software	-	\$ 50,000
Contractor support for software conversion-		\$ 25,000
User training	-	\$ 195,000
Communications infrastructure upgrade, consistent with USDA's standard requirements	-	\$ 505,000

Question. Was any fiscal year 1996 funding allocated for this initiative? If so, how much?

Answer. In fiscal year 1996, \$750,000 was allocated toward the modernization of the Agency's information technology infrastructure. These funds were spent on commercially-available, off-the-shelf computer operating system software and office automation software, as well as user training in these products.

Question. What are the Food and Consumer Service's plans for automating its infrastructure. Please list all projects, the total investment required, and the current schedule for implementation and funding.

Answer. Over the past decade the Food and Consumer Service's information technology infrastructure has seriously deteriorated. Many of the Agency's standard software packages are so old that the Agency cannot share data electronically with many of our program partners. Much of the existing hardware in the agency is nearly obsolete, and will not run new software applications. To address this serious threat to the Agency's mission and worker productivity, the Agency is now

renovating its information technology infrastructure as envisioned in its Agency Infrastructure Modernization (AIM) plan.

AIM is a twelve-year plan that began in fiscal year 1995 with an agencywide requirements analysis, and continues through fiscal year 2007 with two computer purchasing phases. Phase I requires a total investment of \$8,750,000. Phase II is estimated to require an investment of \$10,000,000. As part of the AIM Plan, FCS has established standard computer hardware and software platforms. The \$3 million requested for fiscal year 1997 will continue the Agency's progress toward the standard platform outlined in Phase I of the AIM Plan. Beyond fiscal year 1997 the following investments are planned:

- FY 1998:** **\$3,000,000:** Funds will be used to complete hardware and software standardization; upgrade and improve network services hardware and software; provide portable/remote computing hardware and software; and provide user training.
- FY 1999:** **\$1,000,000:** Funds will be used for required hardware and software upgrades; telecommunication upgrades; mid-range computing replacement; and user training.
- FY 2000:** **\$1,000,000:** Funds will be used for hardware and software upgrades; advanced technologies; and user training.
- FYs 2001-2007:** **\$10,000,000:** These years, in essence, repeat the cycle of the previous six years. Advances in technology will have made the computers and software purchased in 1996 through 1998 obsolete.

NEW FARM BILL

Question: The President has signed the new farm bill into law. Do you propose any revisions to your fiscal year 1997 requests as a result of any of the new nutrition assistance program authorizations contained in that law?

Answer. We are not proposing any specific changes at this time due to the enactment of the Farm Bill. However, we do want to fund the program for Nutrition Assistance to Puerto Rico at the authorized level and the Community Food Projects as authorized by the Federal Agriculture Improvement and Reform Act of 1996. A budget amendment may be submitted in the near future.

STAFFING, EXPENSES AND TRAVEL

Question. To what extent, if any, are expenses of the Office of the Under Secretary for Food, Nutrition, and Consumer Services, including those of staff, being charged to the Food and Consumer Service or other USDA agency?

Answer. Nine following staff persons are assigned to the Office of the Under Secretary but are funded from Food and Consumer Service (FCS) appropriations. The detail is provided for the record:

<u>Position Title</u>	<u>Pav Grade</u>	<u>Annual Salary</u>
Confidential Assistant	GS-301-13	\$58,154
Confidential Assistant	GS-301-13	54,630
Confidential Assistant	GM-301-15	78,385
Supervisory Program manager	GS-340-15	83,284
Assistant to the Administrator	GS-301-13	52,867
Senior Budget Analyst	GS-560-13	54,630
Staff Assistant	GS-301-09	35,769
Correspondence Control Assistant	GS-303-07	27,568
Assistant Project Manager	GS-301-14	70,804

Travel expenses for the above staff for fiscal year 1995 totaled \$2,294 paid from FCS appropriations.

In addition, FCS will reimburse the USDA Working Capital Fund \$4,000 in fiscal year 1996 for the Computer Services Unit that provides services to the Office of the Under Secretary.

Question. Please provide the FTE's funded in the FY 96 appropriation for the Office of the Under Secretary for Food, Nutrition, and Consumer Services and the current on-board staffing level(FTE equivalent) in this office.

Answer. Five staff years are assigned to the Office of the Under Secretary. Three are fully funded. Current on-board staffing level for fiscal year 1996 is 12; 10.59 FTE.

Question. What is your policy on detailing USDA or other Federal agency personnel to the Office of the Under Secretary for Food, Nutrition, and Consumer Services? Please provide a comprehensive list of all USDA or other Federal agency detailees to your office in the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer. The Food and Consumer Service (FCS) has employees on detail to the Office of Under Secretary for Food, Nutrition, and Consumer Services. Our policy on details to the Office of the Under Secretary is that FCS employees on detail continue to fully support the Agency's mission to alleviate hunger and to safeguard the health and well-being of the nation through the administration of nutrition education and domestic food assistance programs. No other United States Department of Agriculture or other Federal agency employees are detailed to the Office of the Under Secretary for Food, Nutrition, and Consumer Services. A list of USDA and other Federal agency employees detailed to FCS in the past year will be provided for the record.

[The information follows:]

DETAILS TO FNCS FROM USDA AGENCIES APRIL 23, 1995 - APRIL 22, 1996

NAME	FROM POSITION/ORGANIZATION	TO POSITION/ORGANIZATION	FROM	TO	PURPOSE
Fitzgerald- Chab, Agnes	Correspondence Control Asst, GS-0303-07 USDA/OGAPI Alexandria, VA	Unclassified Position USDA/OFC of Under Secy for FNCS Washington, DC	12/24/95	Indef.	Secretarial Support
Layden, William	Supvy. Program Manager GS-0340-15 USDA/CNPP/NPS Washington, DC	Executive Asst. to Under Secretary FNCS GS-0301-15 USDA/FNCS Washington, DC	03/25/96	05/23/96	Provides Program and Admin Support in absence of Incumbent
Lucas, Richard	Asst to Administrator GS-0301-13 USDA/FCS/OA Alexandria, Va	Asst. to Administrator GS-0301-13 USDA/FNCS Washington, DC	10/30/94	Indef.	Provides Program Support
Brown, Gail	Staff Assistant GS-0301-9 USDA/FCS/OA Alexandria, VA	Staff Assistant GS-0301-09 USDA/FNCS Washington, DC	02/20/94	Indef.	Provides Admin support to Deputy Under Secretary for FNCS
Dager, Daniel	Senior Budget Analyst GS-0560-13 USDA/FCS/FM/Budget Alexandria, Va	Senior Budget Analyst GS-0560-13 USDA/FNCS Washington, DC	07/09/95	Indef.	Provides Budget and Legislative Support

Heiman, Diane	Asst. Project Manager GS-0301-14 USDA/FCS/OA Alexandria, VA	Asst. Project Manager GS-0301-14 USDA/FNCS Washington, DC	02/13/96	Indef.	Provides Team Nutrition Support
Schultheis, Mary Beth	Conf. Asst. to Administrator GS-0301-13 USDA/FCS/OA, Alexandria, VA	Conf. Asst. to Administrator GS-0301-13 USDA/FNCS Washington, DC	01/22/95	Indef.	Provides Administrative Support
Buntrock, Donna	Conf. Asst. to Administrator GS-0301-13 USDA/FCS/OA, Alexandria, VA	Conf. Asst. to Administrator GS-0301-13 USDA/FNCS Washington, DC	09/05/93	Indef.	Provides Administrative Support
Ford, Dorothy	Conf. Asst. to Administrator GS-0301-15 USDA/FCS/OA, Alexandria, VA	Conf. Asst. to Administrator GS-0301-15 USDA/FNCS Washington, DC	10/03/93	Indef.	Provides Legislative Support

Question. Are employees of the Food and Consumer Service currently detailed to other USDA or other Federal agency offices? Please provide a comprehensive list of all FCS employees detailed in the past year, the length of detail, and the purpose of the detail.

Answer. Yes. Employees of the Food and Consumer Service are currently detailed to other USDA Agencies and other Federal Agencies. I will provide the information for the record.

[The information follows:]

DETAILS FROM FCS TO OTHER USDA AGENCIES AND OTHER FEDERAL AGENCIES
APRIL 23, 1995 - APRIL 22, 1996

NAME	FROM POSITION/ORGANIZATION	TO POSITION/ORGANIZATION	FROM	TO	PURPOSE
Trivers, Laura	Confidential Assistant to Administrator, GS-0301-12 USDA/FCS/OGAPI Alexandria, VA	Conf Asst to Admin GS-0301-12 USDA/OFA Washington, DC	11/08/95	Indef.	Writes Speeches for Sec. of Agriculture
Rogers, George	Supervisory Program Analyst, GM-0343-14 USDA/FCS/SNP/CND Alexandria, VA	Unclassified position USDA/OFC. of Civil Rights Enforcement Washington, DC	11/30/92	03/31/96	Worked on Civil Rights Enforcement Activities
Frost, Alberta	Program Manager, GM-0343-15 USDA/FCS/SNP/CND Alexandria, VA	USDA, Foreign Agriculture Service South Africa	11/15/95	02/15/96	Provides Guidance on FCS Programs
Benderly, Jordan	Grants Mgmt. Spec. GM-0501-15 USDA/FM/GMD Alexandria, VA	Unclassified Duties Dept. Of Justice Washington, DC	02/25/96	08/25/96	Provides support to the Fin. Crime Enfcmnt Network
Demarr, William	Property Mgmt. Spec. GS-0301-13 USDA/DAM/ASD Alexandria, VA	Telecommunications Specialist GS-0391-13 USDA/IRM Washington, DC	02/04/96	05/25/96	Performs Telecomm Work

DETAILS FROM FCS TO OTHER USDA AGENCIES AND OTHER FEDERAL AGENCIES
APRIL 23, 1995 - APRIL 22, 1996

NAME	FROM POSITION/ORGANIZATION	TO POSITION/ORGANIZATION	FROM	TO	PURPOSE
Dunn, Michael	Operating Accountant GS-0510-11 USDA/FCS/MARO/FM Robbinsville, NJ	Unclassified Duties USDA/OIG/NERO Riverdale, Md	09/05/95	01/02/96	Provides Technical assistance on use of automated accounting systems
Radzikowski John	Asst Administrator ES-0301-04 USDA/FCS/OA Alexandria, VA	Department of Treasury EBT Task Force Washington, DC	11/15/93	01/20/96	Leader of Electronic Benefits Task Force
Temoshok, David	Program Manager Specist, GM-0343-15 USDA/FCS/FSP Alexandria, VA	Department of Treasury EBT Task Force Washington, DC	01/24/94	03/31/99	Assist Leader of Electronic Benefits Task Force
Adkins, Laura	Financial Management Specialist, GS-0501-13, USDA/FCS/DAFM Alexandria, VA	Department of Treasury EBT Task Force Washington, DC	11/15/93	05/10/96	Provides Admin Assistance to Leader of EBT Force

DETAILS FROM FCS TO OTHER USDA AGENCIES AND OTHER FEDERAL AGENCIES
APRIL 23, 1995 - APRIL 22, 1996

NAME	FROM POSITION/ORGANIZATION	TO POSITION/ORGANIZATION	FROM	TO	PURPOSE
Crampton, Kathleen	Supvy Systems Accountant, GM-0510-14 USDA/FCS/DAFM/ACD Alexandria, VA	Unclassified position USDA/Office of the Chief Financial Officer Washington, DC	11/08/93	09/30/96	Works on Special Financial Project
Hines, Donna	Program Analyst GS-0343-13 USDA/FCS/OGAPI Alexandria, VA	Program Analyst GS-0343-13 USDA/OPA Washington, DC	06/12/94	09/30/96	Works on Americorps Program Activities
Kowal, Boyd	Program Analyst GS-0343-13 USDA/FCS/OAE Alexandria, VA	Management Analyst GS-0343-14 USDA/OICD Washington, DC	07/25/96	07/19/95	Provided analysis and evaluation of ongoing programs
Phillips, Sharon	Correspondence Asst. GS-0303-07 USDA/FCS/OGAPI Alexandria, VA	Unclassified Position USDA/FNCS Washington, DC	10/18/93	11/25/95	Provides Secretarial Support
Dickson, Vivian	Conf. Asst. to Administrator GS-0301-12 USDA/FCS/OA Alexandria, VA	Conf. Asst. GS-0301-12 USDA/NRCS Washington, DC	03/02/95	12/14/95	Provides Administrativ e Support
Balsam, Stephan	Financial Manager GM-0505-15 USDA/FCS/DAFM	Unclassified Position Office of the Chief Financial Officer, USDA Washington, DC	11/01/95	09/30/96	Working on Special Financial Project

Question. Please provide a detailed list of all foreign travel taken by the Under Secretary, or any employee of that office, or the head of any agency reporting to the Under Secretary, including: duration, destination, cost, purpose, account charged for the cost of the travel, and the number of employees accompanying the individual. Also provide information on foreign travel of all employees of the agencies to include number of trips, total cost, and account charged, summarized by major categories for the purpose of travel, e.g., to present professional papers, do scientific research or fieldwork, to attend meetings, etc.

Answer. Two employees of the Food and Consumer Service conducted foreign travel in fiscal year 1995 and 1996.

The Director, Child Nutrition Division and the Associate Administrator, traveled to Pretoria, South Africa and various places in country at the request of the South African Department of Health. The travel was associated with the design of a provincial program for integrated nutrition. The trip was from November 15, 1995 through February 16, 1996. Its cost was \$15,723.98 and was funded from appropriations of the Foreign Agricultural Service.

The Executive Director, Federal EBT Task Force traveled to Berlin, Germany as an invited speaker at the Multicard '95 Conference. The Executive Director provided an overview of the mission of the Federal EBT task Force and the strategy for achieving the goal of nationwide EBT. Likewise, the Executive Director learned more about electronic benefit delivery initiatives of European countries and emerging card technology. The trip was from January 11-13, 1995. Its cost was \$795.15 and was funded from the EBT Task Force line item of the Food Stamp account.

There was no foreign travel by the Under Secretary or employees of this office.

COMMODITY SUPPLEMENTAL FOOD PROGRAM

Question. Given the fact that the Commodity Supplemental Food Program serves only seventeen States, the District of Columbia, and one Indian tribe and two States receive the bulk of commodities provided under the program, shouldn't commodity assistance funding not be earmarked for this program but spread more evenly among the States? If not, why?

Answer. The Commodity Supplemental Food Program (CSFP) was established by the Congress to operate as a separate and on-going program to meet the nutritional needs of low income women, infants, and children, and senior citizens. Although service to women and children continue to be a program priority, with the rapid growth of WIC toward full funding, to make up of CSFP has changed considerably. Although the program was reauthorized by the FAIR ACT through the year 2002, Appropriations Act language consolidating CSFP with TEFAP and Soup Kitchens, as well as State preference for greater flexibility in managing caseload, lead us to reconsider the nature and structure of CSFP Regulations are under development to give States greater flexibility in managing their commodity allocations.

QUESTIONS SUBMITTED BY SENATOR MC CONNELL

FOOD STAMP FRAUD

Question. What has food stamp fraud and trafficking cost the federal government for each of the past five years? What progress has been made in this area?

Answer. We have made progress on both trafficking and eligibility fraud. In August 1995 USDA released The Extent of Trafficking in the Food Stamp Program, the first data-based, nationwide estimate of the prevalence of trafficking in the food stamp program. This report concluded:

"About \$815 million was trafficked for cash from the government by stores during fiscal year 1993. This amounts to just under four cents of every dollar of food stamp benefits issued."

While trafficked benefits are not a cost to the federal government, they are a diversion of the food stamp benefit away from the intended purpose of buying food. FCS takes such diversion very seriously. Diversion of benefits through trafficking violates the law, reduces the nutritional benefits of the program, and undermines the public perception of the integrity and utility of the Food Stamp Program.

The August 1995 estimate was based on analysis of outcomes in over 11,000 undercover investigations conducted between March 1991 and March 1994 which had completed outcomes. They provided a statistically sufficient basis for estimating the extent of trafficking during Fiscal Year 1993; an appropriate database for earlier years is not available. The Agency conducts about 5,000 undercover investigations per year. Because appeals on these cases are not finished, USDA does not yet have a sufficient number of new completed investigation outcomes to calculate a statistically reliable data-based estimate of trafficking for more recent years.

In fiscal year 1995, FCS Compliance Branch in cooperation with the Office of Inspector General and the Office of General Counsel continued to make substantial use of the False Claims Act to pursue egregious cases of trafficking: 130 actions resulted in judgements totaling over \$1.2 million.

FCS is taking new actions to prevent trafficking. The absence of in-person visits to food retailers prior to authorization is widely perceived as exposing the Food Stamp Program to the risk of trafficking. The President's fiscal year 1997 Budget includes \$4.2 million to support pre-authorization visits by contractors to food retailers. During the balance of fiscal year 1996 FCS is devoting \$1 million of food stamp research funds to prepare to utilize the requested resources and has initiated a demonstration and evaluation, through its Regional Offices, of contracting for vendors around the country who can visit an applicant store in-person on an "as needed" basis and take photographs of staple food stock and fill out a checklist of items regarding the store. These actions will reduce trafficking by ensuring that only eligible food stores are authorized to redeem food stamps.

The dollars involved in eligibility fraud remain very difficult to estimate since overissuances can be caused not

only by fraud, but also by client or caseworker misunderstanding. While Quality Control (QC) reviewers attribute some of the overissuances to possible client fraud based on their review of a sample of cases, until an investigation is conducted into each case and a hearing or court decision is rendered, there is no definite finding of an intentional program violation (IPV).

In addition, in fiscal year 1995 State agencies conducted 770,566 recipient fraud investigations -- 15 percent more than the year before. Of these, 136,143 positive pre-certification investigations resulted in a decision to deny the applicant who would have otherwise been certified and 124,797 positive post-certification investigations were referred for an administrative hearing or consideration of prosecution. In the same period, 83,584 individuals were disqualified from the program as a result of a finding of an intentional program violation.

Question. How much can be traced to error/abuse in handling paper work by employees? Could you please provide figures actual or estimated for the last five years? What progress has been made in this area?

Answer. Most errors in certifying households are due to either the client or State agency worker not providing or processing household information. While FCS does not have any direct information on the amount of error that occurs due to paper work, States are continually working to improve their ability to timely process information, regardless of whether the information is on paper or entered into a computer system. For example, Los Angeles, California is testing an Electronic Eligibility Reporting System to enable no-income households to file their monthly reports electronically when they pick up their benefits. In Connecticut, the State agency developed, and local staff are now successfully using, a shortened form for Food Stamp recertifications and Public Assistance and Food Stamp redeterminations. Additionally, some States, such as Tennessee, have developed automated welfare systems that are largely paperless. Many States, such as Connecticut, Rhode Island, Florida, Vermont, and Indiana, have also added features to their automated systems that allow information from some Federal databases to be appended automatically to the Food Stamp casefile. Although there is no evidence that more or less reliance on paper or electronic information processing leads to a higher or lower rate of error, agency error is significant. Agency errors include misapplying policy, failing to act on reported information, or disregarding information. Agency errors comprise about 46 percent of all errors (See below for last five years).

Fiscal Year	Agency Error (%)
1990	41
1991	40
1992	40
1993	39
1994	46

FOOD STAMP INTEGRITY

Question. Promoting Food Stamp Program integrity is a key part of our responsibility to taxpayers to ensure that

program benefits are used as intended. Do you have any legislative proposals or changes that would enable you to do a better job in this area?

Answer. We share your concern about improving the integrity of the Food Stamp Program and have made it one of our principles of reform. The President's 1997 Budget contains over a dozen proposals for improving program integrity. The Administration's position on this issue is simple: we will not tolerate program fraud or abuse. In March 1995, the Department announced a three-tiered, legislative and administrative initiative for combating fraud and retailer trafficking. The first tier, pre-authorization screening, entails tightening retailer requirements to keep fake or illegitimate stores from becoming authorized. The second tier, post-authorization controls, consists of enhancing monitoring of authorized retailers by moving quicker on suspensions, accessing more information from more sources about business and tax integrity, and tracking stores using better technology. The third tier, stiffer penalties, entails the imposition of tougher penalties on retailers and recipients convicted of ripping off the program. A description of the legislative proposals necessary to carry out the three-tiered initiative is attached. Most of the provisions have been passed by both the House and the Senate. The proposals are included in the President's budget.

[The information follows:]

FOOD STAMP PROGRAM INTEGRITY PROPOSALS

PRESIDENT'S FISCAL YEAR 1997 BUDGET

1. Simplify and expand claims collection tools
 - ◆ Extend all claims collection methods to State-caused overissuances
 - ◆ Require States to participate in tax and salary offset programs
 - ◆ State clearly in statute that information obtained from food stamp applicants can be shared with IRS for the purpose of applying tax offset to the collection of outstanding claims
 - ◆ Amend the Internal Revenue Code to establish separate authority to allow State agencies access to necessary taxpayer information
 - ◆ Establish a uniform 25 percent retention rate by the States for collections of claims resulting from recipients' errors and fraud
2. Require the Department to establish time limits for retailers' authorizations
3. Authorize the Department to require applicant retail food stores to provide tax documents, to require participating stores to give written permission to the Department to verify all tax filings with other agencies, and to require participating stores to permit the Department to obtain corroborating documentation from independent sources in order to verify store legitimacy

4. Establish a waiting period of at least 6 months before stores can re-apply for authorization after their initial applications are denied because they do not meet the authorization criteria
5. Immediately suspend retail food stores pending administrative/judicial review of any permanent disqualification determination; hold the Department harmless from liability for any loss of sales during the suspension period
6. Amend the Social Security Act and the Internal Revenue Code to expand the Department's authority to share taxpayer identification numbers--Social Security Numbers and Employer Identification Numbers--with State investigative and law enforcement agencies that have access to these numbers
7. Authorize the Department to apply food stamp disqualification penalties against stores disqualified from the WIC Program for the same length of time but not necessarily concurrently
8. Disqualify retailers who intentionally submit falsified applications that would lead to fraudulently-obtained authorizations
9. Expand forfeiture authority to require seizure of any property used in or derived from food stamp trafficking
10. Expand the definition of "coupon" to encompass authorization cards, cash or checks issued in lieu of coupons, or access devices (e.g., EBT cards and personal identification numbers)
11. Double existing 6-month and 1-year disqualification penalties for serious violations by recipients to 1 and 2 years, respectively
12. Disqualify for 10 years recipients who are found by food stamp State agencies or Federal or State courts to have fraudulently misrepresented their identities or residences in order to receive multiple food stamp benefits
13. Disqualify fleeing felons, individuals fleeing to avoid prosecution for a felony, or individuals violating a condition of probation or parole
14. Require States to exchange information with law enforcement officers about food stamp recipients (addresses, social security numbers, and (if available) photographs) who are fleeing felons or probation/parole violators.

WIC FOODS

Question. On March 18, 1996, USDA issued a notice of intent to reconsider, and perhaps eliminate, the sugar cap that applies to breakfast cereals in the Special Supplemental Food Program for Women, Infants and Children (WIC).

What is the impetus for revisiting this issue at this time?

Answer. Over the past several years, USDA has received inquiries asking the Department to reexamine the need for a federally imposed 6-gram sugar limit for WIC-eligible adult cereals. Members of the public have expressed concern that research conducted since the 1981 WIC food package regulations were issued indicate that the independent factor of sugar intake does not appear to increase one's risk of developing coronary heart disease, diabetes mellitus, obesity or hyperactivity. Therefore, the Department, in being responsive to these requests, is soliciting comments from WIC State and local agencies, nutrition and health authorities, and other interested parties on the continued appropriateness of the 6-gram sugar limit for WIC-eligible adult cereals.

Question. What new evidence justifies a policy reversal in this area?

Answer. We are not certain that new evidence justifies a change in WIC policy; rather, the process that USDA is pursuing is designed to solicit the views of scientific experts, program stakeholders, and the public with regard to potential changes.

As stated in the notice, USDA is aware that knowledge about the association of sugar consumption and chronic diseases has been evolving over recent years. Recent studies have found that ANY fermentable carbohydrate -- both starches and sugars can contribute to the incidence of dental caries. However, with the exception of dental caries, the independent factor of sugar intake does not appear to increase one's risk of developing diseases such as coronary heart disease, diabetes mellitus, obesity or hyperactivity. USDA is interested in public views on this subject, prior to determining any possible need for change.

Question. In a 1992 report, several well known public health officials and organizations including the National Academy of Sciences, the Surgeon General, and the National Research Council were quoted on the prevalence of dental caries among low income populations and the link between dental problems and sugar consumption.

Have any of these individuals or organizations changed their position on the pervasiveness of dental caries or the link to sugar consumption?

Answer. Clinical evidence continues to support the correlation between sugar and dental caries. However, USDA is aware that recent studies have found that both starches and sugars can contribute to the incidence of dental caries. Therefore, potentially the grain part of a breakfast cereal, which is a source of starch, as well as the sugar content, could be factors in the development of dental caries. The Department welcomes comments from professional dental associations and dental health experts to clarify whether an increased sugar content of a breakfast cereal would affect the consumer's risk of dental caries.

Question. The WIC Program already offers participants a choice of more than 50 approved cereals. Why would USDA consider an exemption for higher-sugar fruit cereals?

Answer. Even though current regulations do offer a considerable number of eligible WIC cereals, the Department nevertheless is interested to know from the public whether this Federal requirement prevents WIC agencies from authorizing brands of cereals that they feel would be nutritious additions to the current variety of WIC-eligible cereals.

Question. Is there some nutritional benefit of doing so that would outweigh the concerns about dental problems?

Answer. USDA is seeking comments from the WIC, health and nutrition communities at large on the nutritional advantages or disadvantages, and other considerations of any change in the current 6-gram sugar limit for WIC-eligible adult cereals. The Departments' actions regarding a rulemaking is dependent upon public comment and reaction. If the preponderance of advice and evidence supports retaining the current sugar limit due to nutrition- or health-related concerns, the Department is unlikely to take any action to propose a change in the current requirements.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

WIC IMMUNIZATION

Question. Research conducted by CDC and state health official over the past five years demonstrates that linkage between WIC and immunization services has the potential to double the immunization coverage rates of high risk children. In 1996, Congress directed CDC to set aside \$15 million to fund personnel and other support needs in WIC clinics for the purpose of screening, referral and incentive programs related to immunization. USDA and the WIC directors have been working with CDC over the past 6 months to implement this WIC linkage program.

What is the status of this cooperative project?

Answer. In response to this Congressional directive and other coordinated WIC and immunization activities, CDC formed a WIC/Immunization linkage working group. The working group is composed of staff from USDA, CDC and the National Association of WIC Directors. This working group will serve as a steering committee for current and future CDC/WIC immunization linkages on a national level. The primary focus of the working group over the past 6 months has been the development of criteria which was used to qualify State immunization grantees for the special Immunization Action Plan grant funds. CDC has reported that 47 out of 59 State immunization grantees have already qualified for these funds and the remaining 12 are currently in the clearance process. It has been estimated that approximately 1600 WIC sites will report process and outcome measures on the proposed initiatives. The data collection for these sites will begin in September 1996.

Question. How many WIC sites currently have systems in place to assess immunization and refer for care at each contact with the mother of a child under age 2?

Answer. All WIC agencies perform some degree of immunization assessment and referral activities since this is a required health adjunct activity for WIC. In 1994, State WIC agencies were surveyed regarding this and other immunization

promotion issues. While some local WIC agencies nationwide reported that they assess the immunization status of WIC infants and children using parental recall or by simply asking the parent if the child is in need of immunizations, the majority use written or computerized records to assess the immunization status of WIC participants. USDA has encouraged State WIC agencies to form an electronic link with immunization registries when feasible. This type of linkage can increase the quality of the assessment while reducing the burden to the local WIC staff. WIC and CDC's National Immunization Program are currently working together to further encourage and support these types of linkages.

Question. If given adequate resources, would WIC directors agree to assessment and referral at every contact?

Answer. The type and intensity of immunization assessment and referral vary greatly between States and even within States. These can range from a general inquiry, relying on parental recall, to a sophisticated multi-faceted computerized assessment. The frequency of these assessments vary from one time per certification period to every encounter (i.e., 1 to 12 times per year). Most WIC State directors agree that a thorough assessment of the needs of each participant at every encounter is the ideal situation.

However, there are many considerations that a State and local agency director must weigh in undertaking such an intense service delivery strategy. Among these considerations are client caseload, physical space, staff time, program infrastructure, availability of other resources, and capability of staff to accurately determine immunization status. This latter consideration is no small concern of both immunization and WIC staff. A CDC study found that even when a trained public health nurse was used to manually determine the immunization status of a child, they were accurate only about 25 percent of the time. This is why both CDC and USDA believe that the quality of an immunization assessment is greatly increased with the assistance of immunization assessment software.

Question. What is USDA's estimate of the cost for implementing assessment and referral at every contact in WIC sites?

Answer. USDA has no cost figures for assessment and referral of each WIC participant at every encounter. If an intervention such as this were implemented, it could result in as many as 12 contacts annually per participant. There are many issues that would influence the cost of such an intense intervention. Among these considerations are the intensity, type and sophistication of the assessment; the automation status of the immunization and WIC programs; physical space within a clinic; infrastructure considerations; clinic capacity and caseload flow; staffing policies; and availability of other resources.

QUESTIONS SUBMITTED BY SENATOR KERREY

COMMODITIES NUTRITIONAL ANALYSIS

Question. What barriers exist to providing schools nutritional analysis for the commodities provided by USDA?

Answer. Nutrient data is available on all commodity products in our publication Facts About USDA Commodities, FNS-251 (fact sheets). This information was updated in the form of a chart in February 1996, and sent to all Food and Consumer Service (FCS) regional offices for further distribution to the States. The chart added values for saturated fat and included some new foods that were not found in FNS-251. The fact sheets are also being revised and will be available later this year. The revised fact sheets will include the nutrient data from the chart and will add values for fiber, as well as presenting the other information, such as product description, yield and storage information among other topics.

Nutrient data on commodities is also available through the National Nutrient Database for Child Nutrition Programs (NNDCNP). This database was developed to meet a requirement in the final rule "School Meals Initiative for Healthy Children" and is incorporated into all approved software, which will be used to do nutrient analysis on school meals.

Nutrient data is obtained for new commodity products as they are distributed. The information is incorporated into the NNDCNP on a regular basis and is released in the form of individual fact sheets when distribution of the commodities occurs.

Question. Has USDA considered surveying or soliciting input on commodities directly from school food service program employees?

Answer. Input from schools has been a part of USDA's food distribution system for many years. Food Distribution Program regulations require the yearly collection and submission of commodity acceptability information from its food assistance programs through the Commodity Acceptability Report. This report has recently been revised to include the Top Ten MOST favorable commodities, the LEAST favorable, and suggestions for new commodities to be added. It is completed by distributing agents based on feedback from food service personnel and school children. Nationwide surveys are conducted on test buys that are purchased before any new commodity is accepted into a food distribution program. These surveys are completed in large part by school food service employees. Taste tests were conducted recently on a limited nationwide basis for several suggested new products; response surveys for these tests were completed entirely by school food service personnel and school children. A 3-year study of program operations has been initiated to solicit feedback on relevant topics from school food authorities.

COMMODITY NUTRIENTS

Question. In general, what is USDA doing to improve communication with school food service providers? [with respect to donated commodities]?

Answer. Food Distribution Headquarters communicates with school food service providers through its Regional office personnel, who conduct business through State Distributing Agencies, who work directly with school food authorities. Headquarters conducts monthly conference calls with its seven Regional Offices to exchange information and keep current on issues; and, within budgetary constraints, holds joint meetings with Regional Program Directors for the same purpose. Direct surveys of school food service personnel are conducted before any new foods are added to the program. The Commodity Foods Newsletter, which contains relevant articles authored by Headquarters staff, is circulated to the more than 23,000 school food authorities. A complaint system is in place to resolve questions about problem products from food service providers, and a toll-free hotline is currently being piloted in an effort to expedite this process. Annual meetings are held of the National Advisory Council on Commodities, American Commodity Distributing Association and the American School Food Service Association. These meetings are scheduled around workshops and speakers from all levels of the commodity distributing process in response to agenda items solicited from school food service providers.

Question. What percent of schools nationwide have currently implemented Nutrient Standard Menu Planning? Does the Department foresee meeting its goals for the number of schools implementing the new system next year?

Answer. We do not have any specific targets for the menu planning systems available to schools. Further, current information on the number of schools that have chosen to implement Nutrient Standard Menu Planning is not available since many school districts are still in the process of deciding which of the three menu planning options to adopt.

Question. Is FNS incorporating commodities into their suggested menus and training and technical assistance on the best way to utilize commodities? How is this being accomplished?

Answer. The Department has emphasized the use of commodities as an essential component of training and technical assistance materials related to school meal planning. In the recently released "Tool Kit for Healthy School Meals", over two-thirds of the recipes make use of one or more of the commodities made available to schools. The Department is currently developing technical assistance materials for Assisted Nutrient Standard Menu Planning. This material contains 5-week cycle menus for both school lunch and school breakfast. Nearly all of the daily menus found in this guidance package contain food items which the Department donates to schools. Finally, the Department maintains a nutritional profile on all USDA donated commodities in its Child Nutrition Data Base so commodities can be readily used by schools that elect menu planning flexibilities available through Nutrient Standard Menu Planning.

TEAM NUTRITION - TRAINING AND TECHNICAL ASSISTANCE

Question. It is my understanding that training and technical assistance is part of the Team Nutrition program. How is FNS supporting school food service professionals through this program?

Answer. FCS is supporting school food service professionals according to our "USDA Team Nutrition Strategic Plan for Training and Technical Assistance to Achieve Healthy School Meals". The Strategic Plan consists of three components, around which all projects and products are organized:

1. Establishing Training Standards and a Resource System
2. Developing a Sustainable Infrastructure: Delivery Systems
3. Supporting an Incentive Program: Team Nutrition Schools

Products developed and/or in process include:

1. Establishing Training Standards and a Resource System

• Training Standards

"Guidelines for Training Food Service Professionals to Achieve Healthy School Meals" was published in July 1995. National training standards have been developed for three levels of school food service professionals: the director, single-unit managers, and production staff. The guidelines are voluntary and are designed to assist state and local food service professionals in organizing and developing training programs for their staff to meet the Dietary Guidelines.

• Training Materials

Healthy School Meals Training Materials will be mailed in April 1996 to States and school districts. The comprehensive trainer's guide includes approximately 600 pages and 180 color slides and reproducible transparencies that concentrate on implementation of the three new menu planning systems to meet the Dietary Guidelines.

Food Purchasing Manual Reference Guide (CHOICE PLUS) was developed through a Cooperative Agreement with the National Food Service Management Institute (NFSMI) and will be distributed to all State agencies and school districts in summer 1996. This Guide consists of approximately 180 pages with 80 photos and 40 illustrations that describe, by specific foods, the key points of a food purchase specification.

Assisted NuMenus Guidance was developed to provide lunch and breakfast cycle menus for schools that elect this menu option. Menus will come with standardized recipes, generic food product descriptions, food preparation methods and nutrient analysis. Distribution will be summer 1996.

A Tool Kit for Healthy School Meals includes 53 newly developed lunch and breakfast recipes that meet the Dietary Guidelines and use USDA commodities. Kits were mailed to State agencies and 92,000 local schools in November 1995 - February 1996.

Great Nutrition Adventure Action Packet includes strategies for working with volunteer chefs, recipes, a video, and a resource directory of chefs from across the country who are willing to volunteer time in schools. Packets will be distributed to all State agencies, 23,000 school districts, and Team Nutrition Schools in April 1996.

School Lunch Challenge Recipes were developed by teams of chefs and school food service directors. Recipes from SLC I were distributed in Fall 1994 and recipes from SLC II will be distributed in May 1996 to all State agencies, 23,000 school districts, and Team Nutrition Schools.

Culinary Training Videos will focus on healthy food production for school food service personnel and are being developed in cooperation with the USDA's Office of Communications. The videos will explore new approaches to the production of healthy, tasty and attractive foods for the school meals programs with an emphasis on developing culinary skills. Videos are scheduled for distribution in Summer 1996 and will include a discussion guide.

Serving it Safe: A Manager's Tool Kit is a comprehensive training package covering food service sanitation and safety to be used by local school food service managers. The Tool Kit contains materials for training in safety and sanitation for all levels of food service employees. It consists of a teacher's manual with written material, teaching aids such as materials for handouts or overheads as well as case studies and suggested group activities for each of the eight chapters. A colorful poster which summarized key points is provided. The Kit includes a set of computer multimedia, self instructional designed training modules with CD-ROM for Windows and McIntosh and disks for Windows and McIntosh computers. Distribution is planned for all State agencies and 23,000 school districts.

2. Developing a Sustainable Infrastructure: Delivery Systems

• State Agency Grants

Team Nutrition Training Grants for Healthy School Meals provided competitive funding to State agencies for State-level delivery of training aimed at enabling local school districts to provide healthy meals that appeal to children and meet the USDA nutrition standards by enhancing or developing a statewide training system for school food service personnel. Nineteen grants were awarded to 26 State agencies on July 1, 1995. Up to \$2 million in grants will be awarded in 1996.

• Workshops

Healthy School Meals Training Workshops were conducted in 8 locations across the nation from January - March 1996. The training uses the Team Nutrition Healthy Meals Training materials to "train the trainers" in all fifty State agencies who will provide training to district and local school food service personnel. The 3-day workshops concentrate on implementation of the three menu planning systems to meet the Dietary Guidelines.

Culinary Training Institutes were conducted in January and February 1996 in three locations for food service personnel at the 28 demonstration sites for Nutrient Standard Menu Planning (NuMenus).

Healthy Meals Electronic Resource System is currently on-line. The National Agricultural Library's Food and Nutrition Information Center (FNIC) has developed an information system, accessible by print, computer disk, and on-line, to provide food service professionals with access to up-to-date information and training materials on preparing healthy meals. This electronic system will include all State-developed materials (including NET Program materials) from across the nation that are related to training on meeting the Dietary Guidelines. The resource program is available on the Internet and will therefore be available to all schools across the nation. For those schools without computer service, the FNIC has phone service Monday through Friday with voice mail. Printouts or copies of materials can be ordered at any time. This resource system includes a discussion group entitled "MEAL TALK" so food service professionals across the country will have a forum for discussion of issues and a way to share ideas via the Internet.

Healthy School Meals Help Line began operation in January 1996. FCS, in cooperation with the National Food Service Management Institute, provides "state of the art" avenues of information, enabling the local child nutrition personnel to obtain quick responses to technical assistance inquiries. This service is available to 92,000 schools. The local schools will be able to access this service through their computers and/or through a 1-800 phone line. The 1-800 phone service will be staffed by school meal specialists during normal business hours and will provide voice mail for those periods of time in which it is not staffed.

National Nutrient Database-Child Nutrition Programs made available the second release of the database to schools and the software industry in July 1995. The database assists local schools that choose NuMenus (Nutrient Standard Menu Planning) to perform the needed nutrient analysis. This data base along with custom designed software provides schools with the information needed to do efficient and accurate analysis. All of the database is available to industry, cooperators and all other interested parties on the USDA Nutrient Databank Electronic Bulletin Board at no cost.

3. Supporting an Incentive Program: Team Nutrition Schools

The **Team Nutrition Schools** program began in September 1995 with one school in each State. To date, almost 10,000 schools have joined the program. Schools enrolled as Team Nutrition Schools are working to meet the Dietary Guidelines, supporting the Team Nutrition Mission and Principles, distributing Team Nutrition materials, involving teachers, children, parents, food service and other school staff, and sharing successful strategies and programs with other schools. Team Nutrition Schools will receive special recognition and Team Nutrition materials. Team Nutrition Schools are also a component of the children's education resources.

HEALTHY SCHOOLS MEALS TRAINING

Question. I am specifically concerned that the materials sent to schools be designed to accommodate a variety of school

kitchens, for example, that the suggestions reflect the reality of school kitchens by not requiring extensive prep work, etc. Are these realities reflected in the suggestions sent to schools?

Answer. Our materials take into consideration self-preparation schools, pre-plated operations, Food Service Management Company operated schools, satellite operations, etc. Additionally, the Healthy School Meals Training materials deal extensively with the variation in meal preparation facilities and skills found at the local level. Another example, the Assisted NuMenus Guidance is designed for schools that may not have the software or hardware to implement NuMenus but want to comply with the School Meals Initiative by using selective lunch and breakfast cycle menus that come with standardized recipes, generic food product descriptions, food preparation methods and nutrient analysis.

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

WIC FOODS

Question. As I understand, USDA has formally proposed to open a comment period to consider revision of Federal regulations on the amount of sugar that is allowed in WIC-eligible adult cereals. I am told that since 1980 WIC-eligible cereals have been limited to 6 grams of sugar per ounce to mitigate negative health consequences and that other WIC food items limit fat and salt for the same reason. On what new science is USDA basing this proposal? Has any research been conducted that warrants increasing sugar content in WIC-eligible cereals or other WIC food items?

Answer. As stated in the Federal Register Notice of March 18, 1996, USDA is aware that the knowledge about the association of sugar consumption and chronic diseases has been evolving over recent years. Recent studies have found that any fermentable carbohydrate -- starches and sugars -- can contribute to the incidence of dental caries. However, with the exception of dental caries, the independent factor of sugar intake does not appear to increase one's risk of developing diseases such as coronary heart disease, diabetes mellitus, obesity or hyperactivity.

The notice clearly states that USDA's solicitation of comments pertains only to the 6-gram sugar limit for WIC-eligible adult cereals, one of the few WIC foods containing added sugar. The Department does not see a need to expand the sugar issue beyond its implications for WIC-eligible adult cereals.

Question. Since sugar contains no essential nutrients and a large majority of adult WIC participants suffer health problems associated with obesity and dental hygiene, it would seem that allowing greater sugar content for these individuals would result in greater health expenditures. What is the administration's view on this issue?

Answer. Our view is that additional information is needed to make a proper determination on this issue. Providing a larger choice of WIC allowable cereals does not necessarily translate into a greater potential for inappropriate food packages for individuals. In fact, a larger choice may improve

States' ability to better meet the specific needs of individuals. It is important to note that competent health professionals at the WIC local level are ultimately responsible for tailoring WIC food packages to an individual's specific nutritional needs. For example, persons with a health problem such as obesity would likely be prescribed lower fat, lower calorie WIC foods that are most beneficial to them, from among a wide range of WIC eligible foods. Along with this tailored food prescription, such persons would be counseled on how to deal with their nutritional problems, including improving their diets and the importance of physical exercise. Conversely, the WIC nutritionist may prescribe a higher calorie WIC food package to meet the needs of a severely underweight pregnant teenager with an appetite problem. USDA is hoping to receive additional information from commenters on whether a change in the 6-gram sugar limit for WIC-eligible adult cereals would have a positive or negative impact on WIC Program operations and participants. USDA is seeking advice on the pros and cons of such a change and welcomes suggestions for alternative options as well. The Department will seriously consider public comments which present compelling evidence that revising the sugar limit would not be in the best interests of the Program and participants.

COMMODITY SUPPLEMENTAL FOOD PROGRAM

Question. Louisiana is one of several States that participate in the Commodity Supplemental Food Program, which now serves over 70,000 individuals per month in South Louisiana. Is the level of funding in the President's FY 97 budget sufficient to continue and administer current caseloads in Louisiana and other States?

Answer. The Department's current projections for the Commodity Supplemental Food Program indicate that the appropriation requested in the President's fiscal year 1997 budget will be adequate to support anticipated program participation levels.

PROGRAM EVALUATION

Question. As I understand, of the total amount budgeted for USDA food program assistance, one percent is mandated to be used for review and evaluation of USDA food programs such as WIC, Food Stamps and other food assistance programs. Are the evaluations being conducted limited to reviewing the efficiency and operation of the USDA food assistance programs? If not, what other areas are being evaluated?

Answer. In addition to reviewing the efficiency and operation of the USDA food assistance programs, the evaluations which are planned or currently being conducted by the Food and Consumer Service (FCS) review the outcomes of our programs and help us prepare to respond to future developments. By broad thematic focus, the number of current or planned research projects for each FCS Program are:

Nutrition outcomes

Ten projects are related to nutrition outcomes in the WIC Program, twelve related to nutrition outcomes in Child Nutrition Programs, seventeen related to integrating nutrition into the Food Stamp Program, and twenty-five related to nutrition security and the Food Stamp Program (nine of which address the impact of welfare reform on the nutrition security of participants).

Program integrity, streamlining, and access

Nine projects bear on WIC Program integrity, streamlining, and access; eight examine Child Nutrition Program integrity, streamlining, and access; ten address Food Stamp Program integrity, streamlining, and access.

Modernizing benefit delivery systems

Seven projects address modernizing Food Stamp Program benefit delivery systems.

Interagency transfers

In addition to conducting research studies, FCS provides funds in support of the Food and Nutrition Information Center to enhance lending and referral services to the Nutrition Education and Training Program and FCS cooperators nationwide. FCS also contributes funds to the Centers for Disease Control and Prevention to assist them in the development of a surveillance system of school health and nutrition, to the Committee on National Statistics to assist them in their work, to the National Center for Education Statistics to support the Early Childhood Longitudinal Study, and to the Panel Study of Income Dynamics to assist in collecting needed longitudinal data on income changes among the low-income population.

Question. Is nutrition evaluation one of these areas? If not, would USDA be supportive of expanding evaluation in this area to examine the foods being provided through USDA programs and looking at how we can better meet nutritional and health needs of the individuals served through these important programs?

Answer. Improving nutrition and health is a priority of this Administration. Several current or planned projects already bear on this area:

- The National Food Stamp Survey - this nationally representative survey of Food Stamp Program recipients will be collecting detailed data on food shopping patterns, food expenditures and household food use, and diet and nutrition knowledge this Spring.
- The Authorized Food Retailer Study - this project is now analyzing the results of a nationally representative survey of the quality and price of food offered for sale by food retailers authorized to participate in the Food Stamp Program.
- Tools and Data Sources for Nutrition Education Evaluation - currently in the procurement process, this effort will make competitive grants available for a variety of purposes, including development of innovative ways to collect information on household food use and sufficiency.
- Nutrition/Health Status of the Low-Income Population - this effort is exploring the relationship of poverty to nutrition and health status through an in-depth review of existing knowledge and new analysis of existing data.
- Nutrition Education Demonstrations - these demonstrations test three innovations for materials and/or for provision

of nutrition education to WIC participants. The innovations are touch screen videos, group facilitation processes and Kids Club. The demonstrations address issues of effectiveness and implementation. The study examines nutrition education for pregnant women, postpartum women, and children.

- WIC Food Purchasing Study - this study examines the types and amounts of foods redeemed by WIC participants. This data will then be compared to participant prescriptions. Information on food redemption patterns can be used to judge the adequacy of food packages.
- Standardized Nutrition Risk Criteria - this project uses the National Academy of Sciences to examine the use of hematological and anthropometric measures in measuring nutritional status. The goal is to develop or provide a reasonable standard for nutritional risk that could be used by all clinics.
- Nutrition Education Assessment - this project investigates the relationship between WIC nutrition education and participant's nutrition related knowledge, attitudes, behavior and satisfaction with services. The study collects data through focus groups, service inventories, and participant interviews in six sites.
- Infant Feeding Practices study - this study addresses the lack of information about infant feeding practices among WIC participants. Information includes types of food consumed, patterns of feeding, food and formula handling practices, measures of infant health, and mother's health promotion behaviors.
- Measuring Program Impact and Dietary Intake - over the past 10 to 20 years significant changes have occurred in American society that make it increasingly difficult to determine children's dietary intake. This project would explore new approaches to obtaining dietary intake from young children.
- Community Nutrition Education Cooperative Agreements - these projects support the design, implementation and evaluation of nutrition education programs that reach large numbers of food assistance recipients, foster development of community networks to better integrate nutrition education service and resources, and provide integrated nutrition education outside of traditional program-centered delivery systems.
- WIC Program and Participant Characteristics Study - Public Laws 99-591 and 99-500 enacted in 1986 require that FCS submit to Congress a biennial report on characteristics of WIC Program participants in the areas of income, nutritional risks, migrant status, and other attributes of WIC participants the Secretary considers appropriate. Biennially, beginning in 1992, all State WIC Agencies are required to provide a Minimum Data Set of 18 variables from their management information systems to FCS for the Congressional Report.
- Nutrient Standard Menu Planning Demonstration Evaluation - a nutrient standard menu planning (NSMP) system is a method of planning NSLP and SBP meals in order to meet a nutrient standard rather than meal pattern requirements.

Using a process evaluation, this study documents the NSMP operational procedures that have been implemented in 31 demonstration sites. It also identifies difficulties encountered and changes made to improve operations. Further, the evaluation estimates the nutrient content of meals offered under NSMP, determines if NSMP affects costs, examines accountability, and assesses the computer systems used in the demonstrations.

- Early Childhood and Childcare Study - this study examines the nutrient content of CACFP meals offered to children and the contribution of CACFP meals to children's usual dietary intake. In addition, the study examines factors that affect the childcare provider's ability to meet the Dietary Guidelines. One of these factors is the extent of the meal preparer's nutrition knowledge.
- Implementation of Nutrition Objectives for School Meals - this study will assess the nutrient composition of meals offered in the NSLP and SBP. Data obtained will be used to determine the progress SFAs have made in implementing the Dietary Guidelines. The nutrient content information collected will be compared to the same information that was collected in a 1993 study.
- Nutrition Education in Schools - in cooperation with the U.S. Department of Education, this national survey will describe the nutrition classes and activities offered to students in public schools. The description includes both traditional classes and nontraditional activities such as health fairs and taste tests.
- NET Activities Inventory - this project will provide FCS a national description of the activities carried out under the NET program.
- School Food Purchase Study - this study will produce national estimates of the type and volume of foods purchased by NSLP and SBP schools, as well as the relative importance of foods donated by USDA. SFAs will distinguish between food items purchased for a la carte sales only and food items purchased for reimbursable meals.
- School Meals Initiative for Healthy Children Implementation - as SFAs begin implementing the School Meals Initiative for Healthy Children and Team Nutrition activities are implemented in schools, this mechanism will collect data from SFAs for policy and programmatic decision-making. The study will collect data annually from a nationally representative sample of SFAs on issues that are the focus of FCS' policy making process.
- Needs Assessment for Team Nutrition - information from prior research indicates that educators receive various materials to assist them in teaching nutrition to school children. Team Nutrition has attempted to fill the gaps in the materials available to those associated with educating children. This project will survey teachers and/or other educators to determine what other assistance they wish in teaching nutrition and health promotion to students.
- Commercialization of School Food Service - this study will obtain information about SFA use of commercial

restaurants (e.g., Pizza Hut, Taco Bell) and branded products; the nutritional quality of the meals offered; and, how student participation is affected by the use of these products.

- Monitoring Implementation of the Dietary Guidelines - as school food authorities begin implementing the School Meals Initiative for Healthy Children, it is imperative that FCS have a mechanism in place to monitor the progress these SFAs are making toward this goal. The Agency is seeking new, innovative alternatives to monitor the implementation of the Dietary Guidelines that would be less complex, reduce costs and decrease burden. This procurement requests a review of current literature and the development of a report that provides alternatives to the current monitoring practices.

Given sufficient additional research monies, USDA would be supportive of expanding current evaluation in this area to examine further the foods being provided through USDA programs, how they educate recipients to maintain good diet, and how FCS can better meet the nutritional and health needs of the individuals served.

QUESTIONS SUBMITTED BY SENATOR CRAIG

TEAM NUTRITION SEMINARS

Question. Please provide a complete breakdown of the costs to the taxpayers to send the school food service workers to food preparation seminars in California, Rhode Island, and New York, including transportation, lodging and all other expenses (including those of USDA personnel) associated with these training sessions.

Answer. The information is provided for the record.

[The information follows:]

1. As a pilot project, USDA conducted 3 "Culinary Skills Workshops for Healthy School Meals" in support of the training efforts proposed in the School Meals Initiative for Healthy Children. These workshops were planned to provide culinary skills to food service production staff and evaluate the culinary training once participants returned to their school food service operations. The population targeted were food production workers and staff currently on a pilot project for USDA in support of the NuMenus program for healthy school meals. The 3 workshops were conducted in January and February of 1996, with exceptionally favorable comments resulting from participants as to the value of such training and their excitement for sharing this knowledge with other food service staff back at their schools. FCS is in the process of evaluating the effectiveness of the training in terms of improving their food service skills, and after the training, what skills are actually being used as well as any barriers or obstacles they may have encountered. A full report is due upon completion in mid June. USDA contracted all the logistics, including transportation and lodging of the 120 food service participants.

The following is a breakdown of the Tasks related to the project:

Administrative arrangements	\$48,310.96
Professional arrangements for culinary sites, includes tuition and Pre-visit arrangements, other expenses.	\$123,786.29
Workshop evaluations and report (not yet invoiced)	\$26,000.00
Actual participant travel, housing, and expenses for 120 participants	\$118,569.42
Total cost of training	<hr/> \$316,666.67
Cost per participant	\$2,639

USDA personnel involved in the technical aspect of the training included only one person at each event. This person was necessary to facilitate the purpose of this pilot project to the school food service staff participants, provide a presentation of the overview of the School Meals Initiative as well as function as a liaison to the contractor on site to respond to questions.

(1.) One technical staff person at the Culinary Institute of America (at Hyde Park, New York) January 15-19, 1996.
Total cost of travel and expenses: \$4,619.24

(2.) One technical staff person at Johnson and Wales University, Providence, Rhode Island January 22-26, 1996.
Total cost of travel and expenses: \$505.03

One senior level visit for 1 day at Johnson and Wales as a stopover on a return trip.

(3.) One senior level person at the Culinary Institute of America (at St. Helena, California) February 11-16, 1996.
Total cost of travel and expenses: \$858.35

Two senior level visits for one morning at St. Helena, as part of a larger West Coast trip that involved several speaking engagements in the area.

2. How many school food service workers were trained? A total of 120 school food service staff were trained from 28 different school districts.
3. What percent of all food service preparers does this number represent? Clearly, since we do not have data on the total number of food preparers in the 92,000 schools participating in NSLP, those trained can be considered "less than 1 percent" of all food preparers. Please note that the intent of this project was not to maximize the number of food service employees trained in culinary skills. Rather, the intent was to focus on a feasible number of food preparers for a pilot project to see how effective direct training from culinary professionals can be, so that future training in this area can be suggested based upon our evaluation of the project.

4. Why was this type of training selected over that available from the USDA-sponsored Food Service Management Institute in Mississippi? The training sponsored by the National Food Service Management Institute was directed to State directors, and school district managers and food service directors as a "Train the Trainer" program. As part of the School Meals Initiative for Healthy Children, culinary training was designed for the hands-on food production workers to receive direct training from culinary professionals with a follow-up evaluation based on implementation of the skills received at the training.

We plan to share our final evaluation report with the NFSMI on our pilot project directed towards food production level staff.

5. Is there any way you can defend this training program as cost-effective?

USDA, in its preliminary evaluation of this pilot project, found that the workshops were an overwhelming success. If these pilot "culinary institutes," upon final evaluation are found "successful," they can be replicated by States, consortia of school food service associations, etc. In that sense, this pilot project could be very cost effective in creating a whole new approach to school-based food service management.

FOOD GUIDE PYRAMID

Question. If USDA has the ability to underwrite food/nutrition training seminars for an infinitesimal number of school food service workers, when does it plan to revise and publish a new Food Guide Pyramid which reflects important new scientific messages in the 1995 Dietary Guidelines and is the single most user-friendly source of nutrition information for the general public--especially children?

Answer. The Food Guide Pyramid is consistent with the messages contained in the 1995 Dietary Guidelines. As part of its ongoing dietary guidance research, the Center for Nutrition Policy and Promotion is updating the science base that supports the food guide. This research considers and incorporates significant changes in food composition, food consumption, and food technologies as well as changes in nutrition recommendations, such as Recommended Dietary Allowances and Dietary Guidelines. Any changes that are made as a result of this process will be coordinated with users of the food guide.

In addition, the Center has initiated work on a prototype for developing the next generation of food guides by designing and constructing a Food Guide Pyramid specifically for children. As part of this multi-year effort, the Center will be 1) conducting analyses of children's current food and nutrient intakes to compare with the existing food guidance system, 2) exploring issues relevant to children, such as appropriate serving sizes and meaningful food group icons, and 3) conducting consumer research with children, parents, and care givers to identify food guide messages that are motivating and actionable with this audience. Part of the Fiscal year 97 funds requested by the Center will be used to support this research.

Question. If USDA fails to revise the Pyramid and its accompanying text, isn't the Government in danger of promoting conflicting nutrition messages at the expense of an already confused public?

Answer. No. The Food Guide Pyramid represents the best advice for translating the Dietary Guidelines for Americans into a daily diet. The Food Guide Pyramid is consistent with the messages contained in the 1995 Dietary Guidelines. However, USDA's Center for Nutrition Policy and Promotion is in the process of slightly revising the Food Guide Pyramid brochure (Home and Garden Bulletin No. 252) to reflect the language of the 1995 Dietary Guidelines. The Center also has an ongoing project to update the research base supporting the Food Guide Pyramid, considering changes in food composition, food consumption, nutrition recommendations, and new food technologies. Any changes that are made as a result of this process will be coordinated with users of the food guide.

SUBCOMMITTEE RECESS

Senator COCHRAN. This concludes today's hearing. I want to thank you all for being here.

Our next hearing will be on Thursday, April 18, at 10 a.m., in this room, in the Dirksen Senate Office Building. We will, at that time, review the budget request for the Natural Resources Conservation Service.

Until then, the subcommittee stands in recess.

[Whereupon, at 11:07 a.m., Tuesday, April 16, the subcommittee was recessed, to reconvene at 10:16 a.m., Thursday, April 18.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

THURSDAY, APRIL 18, 1996

**U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.**

The subcommittee met at 10:16 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Bumpers, and Kerrey.

DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

STATEMENTS OF:

**JAMES LYONS, UNDER SECRETARY, NATURAL RESOURCES AND
ENVIRONMENT**

**PAUL W. JOHNSON, CHIEF, NATURAL RESOURCES CONSERVATION
SERVICE**

ACCOMPANIED BY:

**PEARLIE S. REED, ASSOCIATE CHIEF, NATURAL RESOURCES CON-
SERVATION SERVICE**

**THOMAS A. WEBER, DEPUTY CHIEF, NATURAL RESOURCE CON-
SERVATION PROGRAMS, NATURAL RESOURCES CONSERVATION
SERVICE**

**RICHARD L. DUESTERHAUS, DEPUTY CHIEF, SOIL SCIENCE AND
RESOURCE ASSESSMENT, NATURAL RESOURCES CONSERVATION
SERVICE**

**SHERMAN L. LEWIS, DEPUTY CHIEF, MANAGEMENT AND STRATE-
GIC PLANNING, NATURAL RESOURCES CONSERVATION SERVICE**

**ROBERT K. REAVES, DIRECTOR, BUDGET PLANNING AND ANALY-
SIS DIVISION, NATURAL RESOURCES CONSERVATION SERVICE**

**DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND
PROGRAM ANALYSIS, DEPARTMENT OF AGRICULTURE**

OPENING REMARKS

Senator COCHRAN. The meeting of the subcommittee will come to order.

Today we continue our hearings reviewing the budget request submitted by the President for agriculture, rural development, and related agencies. This morning we specifically will look at the budget request of the Natural Resources Conservation Service. We appreciate very much the attendance of our panel of witnesses today to discuss these proposals. James Lyons, the Under Secretary

for Natural Resources and Environment, and Paul Johnson, Chief of the Natural Resources Conservation Service, are here, along with other members of their staffs.

I would ask Mr. Lyons to proceed with any comments that you would like to make relating to the budget request, and introduce all of those who have joined you this morning. We will then have an opportunity to discuss the testimony. We have copies of your statements. We appreciate very much having those. We will make them a part of the record in full, and encourage you to make whatever summary comments you would care to in addition to the statements you submitted for the record.

Mr. Lyons.

INTRODUCTIONS

Mr. LYONS. Thank you very much, Mr. Chairman. With me are Paul Johnson, Chief of NRCS, and Pearlie Reed, Associate Chief, as well as Tom Weber and Bob Reaves with NRCS, and Mr. Kaplan with the Budget and Program Analysis Shop in the Department of Agriculture. We are pleased to be here to talk about the fiscal year 1997 budget request. We are also pleased to be one of the beneficiaries of a completed appropriations bill last year. I want to thank you personally for your assistance and support in getting that accomplished last year.

SUMMARY STATEMENT OF JAMES LYONS

I am the only one in the Department of Agriculture who has the misfortune of having one agency that is funded through an appropriations act and one that continues to operate under a continuing resolution. And I can personally attest to the frustration and the frightening situation it creates for the 40,000-plus employees in the Forest Service who are uncertain as we go from CR to CR what the future may hold. So I really do appreciate your perseverance and your leadership in completing our appropriations bill last year.

Mr. Chairman, as you know, Washington and the Nation are concerned very much about the Federal deficit, and clearly we are on a course to getting to a balanced budget by the year 2002, whatever course we eventually agree upon. One of the things we are concerned about, and that is resources conservation services looking at deficits not only from the standpoint of fiscal resources but also from the standpoint of natural resources. And I would emphasize that we see our role as a very important one in ensuring that we do not create a natural resource deficit that our children and our children's children will bear the brunt of.

We learned a tremendous lesson, of course, starting with the Dust Bowl days of the 1930's and the importance of conservation in protecting natural resources, and we have come to see the value of maintaining clean water, of addressing the needs of wildlife, of reducing soil erosion and protecting clean air. We continue to work through NRCS to protect our natural resource base in ways that we think are cost efficient, less intrusive in terms of the interests and concerns of private property owners, and in my mind make common sense. And commonsense conservation is what we are trying to promote as we continue the work of the Natural Resources Conservation Service.

Furthermore, we have learned that for programs to work they have to be voluntary. They should be incentive based, and they certainly should consider the costs and the benefits to farmers and ranchers and others who have the primary responsibility for land stewardship across the Nation.

Secretary Glickman has emphasized the importance of conservation during his tenure at the Department of Agriculture. In fact, at an address to the National Association of Wheat Growers, this past year he emphasized the fact that 50 years from now probably no one in the country is going to care about what the target price was for wheat this year—I guess there will not be a target price for wheat this year—but rather people are going to care about what we did to ensure the productivity of our natural resources to maintain clean water, productive soils, or wetlands and diversity of wildlife habitat. That is how we will be measured by future generations.

In the Natural Resources Conservation Service, we think we are playing a key role in establishing a lasting legacy of clean water, air, soil, and wildlife in this country, and one that we can be proud of. NRCS helps to protect our environment by providing scientific information and technical services on natural resource conservation to people who use these resources and affect them the most, private land managers in the Nation.

Furthermore, NRCS helps ensure an abundant supply of food and fiber and the other commodities that come from land and water. And here I would defer to Chief Johnson, who likes to emphasize some of the nontraditional commodities that we produce in agriculture, and that is clean water and fishable streams and abundant wildlife habitat and wetlands.

As we look at American agriculture's conservation commitment, I think it is important to emphasize the very productive partnership that we have been evolving for more than a half century. A partnership that is anchored by landowners, but also by the conservation districts, who have played a critically important role working with State agencies, other Federal departments and agencies, with the research community, as well as a growing number of other partners across the country, partners like Ducks Unlimited and Waterfowl Trust in the Mississippi Delta, who work closely with us to try and help enhance the work we do on private lands.

NRCS' MISSION

NRCS stands for scientific objectivity and a commitment to productive agriculture, in harmony with a healthy land, and a strong belief that voluntary stewardship, in fact, does work. NRCS partnership, I think, is one of the best examples of how Federal programs can be managed with local guidance, local direction, and local support. And we believe our programs work because landowners see them as truly voluntary, and because NRCS provides landowners with conservation options and respects landowners' rights in making final decisions. We do not make decisions for landowners, we help landowners make informed decisions about the future productivity of the land that they own and they care so much about.

In today's changing environment, NRCS is working to partner with a broader constituency, which also means trying to link rural areas and rural interests to urban and suburban interests, through work we are doing in watersheds, such as the watershed for the city of New York, and through the work we are doing in restoring stream banks and in waterways down into suburban and urban areas across the country. This puts added demand on our resources and our people, but I think affords us a tremendous opportunity to get the conservation message out to the 90-plus percent of all Americans that live in those environments, and also to help develop an important linkage between urban and rural Americans.

1996 FARM BILL

As we address our conservation needs, we of course have to consider implementation of new farm legislation. In the Department of Agriculture, I want to tell you, we are all very excited about the opportunities that have been made possible through the Federal Agriculture Improvement and Reform Act, and we see as a tremendous opportunity our role in improving implementation of the Conservation Reserve Program, the Wetlands Reserve Program, the new EQIP Program, as well as other programs like the Wildlife Habitat Incentives Program [WHIP], and I want to commend you, Mr. Chairman, for your vision in putting together the Wildlife Habitat Improvement Program. I have not had an opportunity to go out with you and enjoy some of those wildlife resources, but I have with some of your staff, and they are good shots, by the way. We see a tremendous opportunity here for landowners to realize the benefits of improved land stewardship.

SUMMARY

Together, Mr. Chairman, I think we face a tremendous challenge in developing the 1997 budget. As Federal resources are drawn thin, we are going to have to make tough decisions about the future of conservation services and the kind of services we provide. I ask that you look at our programs in their broadest context, because now I think we have the tools and the technology, the wherewithal and the capability, to truly implement more holistic, and I think more effective conservation programs and plans across this Nation. And I want to thank you again for your partnership and the partnership we have had over the last several years in dedicating our efforts to dealing with the conservation challenges we face.

Aldo Leopold, who is known as the father of wildlife conservation, said some 60 years ago, it is the American farmer who must weave the greater part of the rug on which America stands. We are proud to partner with you and the American farmer in creating that tapestry, and we look forward to an even stronger partnership working with you and the Congress in the future.

With that, I will end my comments, and we would be glad to answer any questions you might have.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Mr. Secretary. We have your complete statement, and it will be made part of the record along with the statement of Mr. Johnson.

[The statements follow:]

PREPARED STATEMENT OF JAMES R. LYONS

Mr. Chairman and Members of the committee, it is an honor to appear before you today to discuss the fiscal year 1997 budget for the conservation programs of the U.S. Department of Agriculture (USDA). With me today is Paul Johnson, Chief of the Natural Resources Conservation Service (NRCS).

Mr. Chairman, one of the most talked about issues in our country and Congress today is the Federal budget deficit. Of course, we each share the concern for the budget, however we must recognize that we have to solve more than just our budget deficit problems if future generations are going to be safe, healthy and happy. We must do everything in our power to not leave a natural resource deficit for our children and our children's children.

To our children's future health and well being, this is just as important as the budget deficit. As a matter of fact, not only must we not add to a natural resource deficit, but we believe that we should do what we can to create a natural resource surplus.

We learned a lesson during the Dust Bowl days of the 1930's—the importance of conserving and protecting natural resources. Since those early days of recognizing the importance of conservation, we have further learned the importance of water quality and clean water's critical role in a growing society. We, today, have a much better understanding of the important role of wetlands in a plentiful supply of clean water. We learned that we must continue to protect our natural resource base in ways that are less costly, less intrusive, and that use common sense. We learned that in order for programs to work they should be voluntary, incentive-based, and consider costs and benefits.

Mr. Chairman, American agriculture continues to be the envy of the world. Our productivity in food and fiber is unsurpassed. And, our commitment to conservation and land stewardship is the foundation upon which highly productive and profitable farming and ranching rests.

Secretary Glickman said something very interesting a few weeks ago in his address to the National Association of Wheat Growers annual meeting. He said that 50 years from now no one in this country is going to remember or care about the deficiency payment rate on corn or wheat, or what our target prices are, for the years of 1997 through 2002. Rather, people are going to care about the quality of our water, our soil, our wetlands, and the diversity of our wildlife.

If that's what this great country is going to care about in the future, and I agree with Secretary Glickman that it is, then we need to continue investing in these things now.

I believe we all know that the agency we are here to discuss today, the Natural Resources Conservation Service, is key to making certain that this country erases any natural resource deficit, creates a natural resource surplus, and establishes a lasting legacy of water, air, soil and wildlife in which this country can be proud.

As I mentioned before, Chief Paul Johnson is here today, and he will provide you with some of his thoughts on these issues and how he sees the agency making this happen, but I'd like to share with you a few thoughts about key objectives we are pursuing to make this happen.

Mr. Chairman, the NRCS helps protect our environment by providing the best scientific and technical information available on natural resource conservation to the people who use it the most—the private land managers of this nation.

Furthermore, NRCS helps ensure an abundant food supply for America. NRCS acts as caretakers of the country's food-producing agricultural land by setting acceptable soil loss standards and helping farmers and others develop conservation plans to keep the soil healthy.

As we look at American agriculture's conservation commitment, Mr. Chairman, what we are seeing is the product of a partnership that has been evolving for more than half a century. It's a partnership that bonds the Natural Resources Conservation Service with local conservation districts and private landowners, with state agencies and other federal departments, with the research community, and with a vast and growing number of partners across the country.

NRCS brings to this partnership its technical expertise, good science, fairness, and flexibility. But more than that, NRCS with its energy, ideas and commitment brings a special bond—a bond of trust. NRCS stands for scientific objectivity, a commitment to a productive agriculture in harmony with a healthy land, and a belief that voluntary stewardship works.

One thing I'm particularly proud of is the renewal of our partnership with America's soil and water conservation districts.

We worked with all the appropriate players to revise the long-standing agreements with districts. This process was started to make sure that the agreements reflect changes in natural resource issues, laws, responsibilities, customer and partner expectations, staffing, and funding.

Today, that process is complete—we have a modernized Memorandum of Agreement which is a vital part of our expanding conservation partnership. It is vital to the increasing leadership roles and responsibilities at local and state levels—a true framework for the future, to ensure locally driven solutions to natural resource concerns.

Last December, Secretary Glickman signed the first modernized Mutual Agreement with the Guilford Soil and Water Conservation District and the Governor of North Carolina. This was in recognition of the birthplace of Hugh Hammond Bennett, the first chief of the Soil Conservation Service, and the acknowledged "father of soil conservation."

Mr. Chairman, as you know, last year during our restructuring, we relied heavily on the extensive involvement of our conservation partners and customers. In 1994 and early 1995, NRCS held 351 public forums. These forums allowed the agency to reach out to some 18,000 people all across the country. Surveys were also conducted, from which we gained insight from an additional 26,000 responses. Further, a Nationwide Gallup Poll was used to get a better sense of where America wanted us to go.

Another important part of customer service was working to make one-stop service centers a reality. In places where USDA Service Centers are up and running, farmers are not only happy with the economies of getting a variety of USDA services from one location, they're also getting those services faster and more efficiently. But as we do this we have got to ensure that conservation districts remain the currently vital and integral part of how USDA operates at the local level.

The NRCS partnership, what I commonly refer to as a cooperative team structure, is one of the best examples of how federal programs can be managed with local guidance at the local level. It works because landowners see it is a truly voluntary approach. It works because NRCS provides the landowners with conservation options and respects the landowners right to make the final decision.

And yet it is a partnership that challenges landowners and users to think beyond themselves—to think of natural resource issues that begin on their properties but reach into their communities as a whole. The partnership calls upon our instincts towards stewardship, towards supporting our communities, and towards future generations that will use their land wisely and live in their communities happily.

Mr. Chairman, in today's changing environment, NRCS is working to partner with a broader constituency. This means linkages with city people, as well as rural communities; with farms and ranches, as well as suburbs and subdivisions. It means working on issues that crosscut all sorts of land areas. The mandate of NRCS is to speak for the health of the land, and so, we cannot serve only one narrow component of this landscape if we are to truly serve a dynamic landscape in a dynamic society.

As we look at this dynamic need, we must consider implementation of new farm legislation. I am excited about the opportunities that are possible in what is likely to come from current congressional proposals. A few of the natural resource pluses are: a more focused and cost effective Conservation Reserve Program; a Wetlands Reserve Program that truly seeks to give landowners needed options; and a new program that combines our past cost-share authorities into a flexible and broad based assistance program. A program, I might add, that USDA will implement with the farmer and rancher as the base on which the program is built. A locally driven program that focuses on resource needs that all Americans can understand and support.

Together, Mr. Chairman, we face a tremendous challenge in developing the fiscal year 1997 budget. As Federal resources are drawn thin, we must make tough decisions regarding the future of the conservation services we provide and the programs we manage. I ask that you consider the programs and activities of the NRCS as a whole—not in isolation, that you consider the human resource needs as we begin to implement a new Farm Bill, and that you evaluate in light of new responsibilities—and new opportunities.

Mr. Chairman, I want to thank you and your committee as together we work to conserve America's natural resources and build the Nation's future conservation agenda.

Paul and I would be happy to discuss specific budget items and answer any follow-up questions you or the committee might have.

PREPARED STATEMENT OF PAUL W. JOHNSON

Mr. Chairman and Members of the Committee, I am pleased to have this opportunity to outline for you the fiscal year 1997 budget request for the Natural Resources Conservation Service (NRCS) and to discuss with you some of the important conservation challenges that confront agricultural producers and others who own and manage private land in this country. This is my third appearance before you as Chief of the NRCS, needless to say, I appreciate your continued concern for natural resource protection, especially during this important time of trying to ensure the American public that the national budget truly reflects public priorities. That is a notable goal for each of us, and I feel we have made significant progress in our agency's effort to reorganize and streamline while promoting conservation policies that achieve cost-effective results.

This is no easy challenge. The United States is blessed with extraordinary natural resources—more than a billion acres of agricultural land and an abundant supply of fresh water. There will be continuing pressures on us to use these resources to produce for the strong and growing world markets. Added to that is the pressure we will continue to impose on ourselves to assist countries that lack the ability to produce for themselves. These are but two of the many issues, of local and global importance, which will continue to place pressure on our natural resource base and our agricultural system.

With enactment of the Food Security Act in 1985 and the Food, Agriculture, Conservation, and Trade Act in 1990, we embarked upon an important path of reconciling the conflict between agricultural and environmental goals—an unnecessary conflict, but a necessary path for our agricultural producers to travel. This ten year journey has set the standard on which much of the new Farm Bill has been based.

The critical element of these programs is that they are designed to be fair, responsive to the real needs of landowners and users, and above all, to improve productivity, farm income and natural resources protection. The programs as they now stand can use improvement; we can do better at listening to the needs of our farm and ranch partners, and we can do much better at tailoring the technology and technical assistance to the land and landowner needs, while keeping high net economic benefits and meeting national goals.

The mission of NRCS is to provide leadership and administer programs to help land owners and users to conserve, improve, and sustain our natural resources and the environment, even while enabling the United States to continue as the world's preeminent producer of food and fiber. Our guiding vision is one of a productive nation in harmony with a quality environment.

NRCS staff works at the local level in partnership with State and local conservation staff, volunteers, and land users to address natural resource protection and development needs. These activities bring multiple benefits, both at the farm level and far beyond, including sustaining and improving agricultural productivity while reducing erosion, improving soil and water quality, reducing and preventing damage caused by floods and other natural disasters. A key element also is enhancing the ability of our agricultural lands to support economic growth, income, and jobs in rural America.

The budget we are requesting for fiscal year 1997, \$1.020 billion, compares to \$859.1 million available for fiscal year 1996. This difference, over fiscal year 1996, includes uncontrollable costs such as those which are associated with inflation and pay costs so that we can maintain fiscal year 1996's program level. The increase will also provide for other high priority items including: first year cost of a 6 year plan to purchase the orthophoto maps and digitize completed soil surveys that are needed to produce projected efficiencies at the USDA one stop field service center; high priority basin wide or area wide high priority plans such as improving water quality by limiting or eliminating agricultural run-off; enrolling approximately 226,200 additional acres of permanent and 30 year easements into the Wetlands Reserve Program; and \$15 million in appropriated funds to enable emergency work to begin immediately through the Emergency Watershed Protection Program without having to rely on supplemental appropriation funds, at least at the initial stages of the emergency.

The bulk of the budget is for maintaining our successful conservation and technical assistance programs and for continued implementation of the agency's reinvention plan, which is aimed at improving NRCS' responsiveness to the needs of our constituencies and the efficiency with which we deliver the services we provide. This budget would maintain NRCS' technical assistance and planning activities, continue level support for watershed project activities, maintain funding for the agency's cost-share programs gained through reorganization, and increase the acreage enrolled in the Wetlands Reserve Program by about 226,200 additional acres.

Before moving to the details of our program activities, I would like to highlight a very important issue that yet again came to my attention in a recent meeting. Last month, we in NRCS had the opportunity to talk with a wheat growers delegation from the Pacific Northwest. After outlining several important natural resource management challenges that confront them and others in the region, they emphasized the importance of maintaining NRCS technical assistance. "Without that assistance," commented one, "we can't possibly get the conservation job done." That is the message we have heard across the country, in forum after forum, over the past two years. "Above all else, maintain your ability to provide technical assistance."

Following is a table showing the major items in this year's budget request and contrasting it with the two prior fiscal years.

(In thousands of dollars)

Appropriation	Fiscal year—		
	1995	1996	1997
Conservation operations	586,351	630,093	657,910
Wetlands Reserve Program	92,310	77,000	188,000
Watershed and flood prevention operations	70,000	100,000	116,036
Resource conservation and development	32,845	29,000	29,377
Watershed survey and planning	23,516	14,000	19,188
Colorado River Basin Salinity Control Program	4,500	2,681	2,681
Forestry Incentives Program	6,625	6,325	6,325

I would like now to describe how NRCS differs from other federal agencies and summarize the role of the agency. I will outline the major programs NRCS administers and describe some of the things we and our partners at the state and local levels have achieved as well as things we have planned.

STRATEGIC ASSETS OF THE NATURAL RESOURCES CONSERVATION SERVICE

NRCS provides natural resources conservation assistance primarily on private lands. More than 70 percent of the land in the contiguous United States is privately owned, including virtually all of the Nation's agricultural lands. It is on the private lands where millions of individual decisions are made by farmers and ranchers, that the ultimate success of the majority of our natural resource efforts will succeed or fail in helping meet the twin goals of productive agriculture and an economically and environmentally sustainable future.

NRCS is the only Federal agency whose major purpose is to provide consistent technical assistance to private landusers across the country. The agency's focus is on helping landowners and users achieve natural resource and environmental goals while maintaining productive and profitable operations and economically viable rural communities. NRCS has had some significant successes in the past, and the structure is designed to continue that success in the future. Let me describe some of the agency's assets in light of the implementation of the USDA Reorganization Act of 1994, including the Department's Field Office Streamlining efforts.

Delivery system.—NRCS has a nationwide network of professionally staffed local offices that provide conservation technical assistance to owners and users of privately-owned land. This nationwide delivery system is based on a partnership that combines a federal natural resource presence at the local level with locally sponsored and controlled conservation districts and their employees. This conservation infrastructure is interwoven and interconnected at the local, State, and Federal levels with complex relationships and program support systems that are interdependent. Local service will be continued, but with the reorganization and consolidation of field offices, this operation will be more efficient and enable our field staff to provide the kind of site-specific technical assistance individual private landowners need and want.

Technical skills.—NRCS' natural resource specialists are trained to deliver technological support to groups and individuals quickly, efficiently, and consistently nationwide. By regionalizing NRCS, our technical staff will be able to apply their knowledge of soil science, engineering, landscape architecture, agronomy, biology, range management, economics, geology, and other fields with a much greater degree of sensitivity to local conditions. NRCS field offices and staff working in partnership with the local conservation districts are used as a primary source of help by local people—and often by people administering programs for other Federal, State, and local agencies. About 9,000 staff are located at these offices.

Technical excellence.—Throughout government and private industry, NRCS specifications for soil and water conservation practices are the national standards. In addition, the agency is the leader in soil classification and soil mapping. Recently, in recognition of the vital importance of soil quality, NRCS has made a commitment to better understand and emphasize the fundamental role of soil quality.

Natural resource planning experience.—NRCS has vast experience in broad-scale planning in watersheds and other areas and site-specific planning on farms and ranches to address natural resource concerns. Effective natural resource planning in the future will require this type of planning process to develop effective solutions that meet the needs for a sustainable land and its people. NRCS is now serving as a catalyst by providing coordination to bring local people together with skilled technical people to develop and implement meaningful solutions. These planning efforts are provided through the Watershed Survey and Planning Program, the Resource Conservation and Development (RC&D) Program, and Coordinated Resource planning provided through Conservation Operations.

Partnerships and volunteerism.—Since its creation, NRCS has operated through voluntary cooperative arrangements with individuals, the private sector, and Federal, State, and local governments. The value of NRCS technical assistance is recognized by local and State partners; equally, we recognize the invaluable contribution of volunteers, who contribute immeasurably to conservation efforts. Americans from all walks of life have freely and generously given of their time. In fact, in fiscal year 1995, some 13,163 NRCS Earth Team volunteers donated 498,000 hours to conservation efforts. As calculated by the Points of Light Foundation, this equates to an additional \$6,000,000 in direct assistance to private landowners and national resource protection.

Local people as decision-makers.—When NRCS delivers conservation and program assistance, the agency works under cooperative agreements with some 3,000 conservation districts that are established under state law. About 17,000 local conservation district supervisors provide the agency with invaluable guidance. The NRCS cooperative team structure is an established and practical example of how Federal programs can be managed with local guidance at the local level. It is crucial to remember that the agency's approach is a voluntary one. Our professionals provide options for problem-solving—developed in conjunction with customers, but it is the customers who make the final decisions.

Leverage.—State and local governments contribute substantially, with both people and dollars complementing NRCS technical assistance. In fiscal year 1995, State and local governments spent more than \$500 million on conservation—a considerable increase from the \$247 million spent a decade ago. Without NRCS technical assistance, which greatly enhances the value of State and local efforts, these funds almost certainly would not have been spent on natural resource protection. In a sense, this cooperation constitutes a two-way leveraging: State and local programs and NRCS benefit from each other's involvement.

USDA REORGANIZATION

A major goal of this Administration has been to "reinvent government" so it works better and costs less, cutting waste and reducing bureaucracy. The National Performance Review (NPR) process, challenging all areas of the Federal Government to do a comprehensive bottom-up review of operations, resulted in innovative and creative ideas on how we ourselves could make necessary and appropriate improvements in the way our agencies do business. Taking these good ideas and incorporating additional improvements, Congress authorized USDA reorganization in the "Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994". With this action, NRCS was given the green light to develop an implementation plan for these exciting new ideas.

Before developing its reorganization plan, NRCS gathered information from its employees, customers, partners, and others. The agency conducted 351 public forums around the country, and received more than 26,000 survey responses. People indicated that they wanted more local involvement in decision-making, continuation

of voluntary conservation programs, NRCS technical expertise maintained and improved, streamlined administrative functions, increased staff at local offices, and less Federal regulation.

In December of 1994, after this extensive public input, NRCS unveiled this far reaching reinvention plan. In addition to the field office closings and consolidations previously announced by former Secretary Espy, the plan called for major restructuring above the field office level. The proportion of NRCS staff at the field office level will increase from the current 70 percent to 80 percent; operational functions are being delegated to the lowest level possible; headquarters operations are being reduced by over 50 percent; science and technology will be focused on areas important to our mission through the establishment of six NRCS Institutes which will improve our capabilities in areas such as grazing lands, natural resource inventory, wetland science, social science, watershed science, and soil quality; the ability of NRCS to address multi-state natural resource and program delivery issues is being improved through the establishment of regional offices; technical support functions are remaining strong and becoming better focused by being moved closer to where programs are carried out; and administrative and other support activities are being thoroughly reviewed for continued improvement in efficiency and better focused to support a modernized agency.

By October 1, 1995, all areas of the NRCS reorganization plan were in full implementation. This included all agency personnel knowing their new role, Regional Conservationists being in their regions and beginning to operate, technical functions reassigned closer to the field, and the transfer of programs such as the Wetlands Reserve Program and Forestry Incentives Program being completed, as provided in the 1994 Act. Further, NRCS field office streamlining efforts were fully under way with the Department, as we begin the multi-year process of moving from the historical field offices, numbering more than 3,000, to the approximately 2,500 USDA Service Centers.

This has not been an easy process, especially from the standpoint of the agency's most important resource—our employees. I am pleased we have been able to use the tools necessary, including authorities from congress, to meet our goals without overly impacting our employees and their careers. I am indeed proud of how NRCS employees have embraced this change and have committed to seeing this reorganization completed—successfully. However, any change this massive cannot be without its' bumps and mistakes. With that reality in mind, in January I asked Associate Chief Pearlle Reed to lead an effort to review our progress. The completion of this appraisal, over the next few months, will give us the necessary information to ensure we are staying on track or make the necessary corrections to meet the goals of the Agency, the Department, and Congress. But most importantly, to ensure our customers that we are preparing this agency for a future which will be able to provide the natural resource assistance necessary to help them meet the challenges they know they will face.

Now I will describe our programs and plans for fiscal year 1997.

PROGRAM EFFECTS AND THE FISCAL YEAR 1997 BUDGET REQUEST

Many programs provided by NRCS are a catalyst for local investment and as a result, enhance local economic activities. Other programs provide services that are voluntary in nature, and not available or provided by other government or private entities. These programs and activities are an essential component of the conservation fabric of the Nation. I will briefly highlight several for you.

CONSERVATION OPERATIONS is the foundation for most of the agency's activities. These activities are carried out through the conservation infrastructure, a complex array of local, State, and Federal agencies and organizations and local people working together for natural resource protection. The relationships are complex and NRCS is an integral part of these local, State, and Federal interdependent program support systems. Many grassroots programs and initiatives are funded by conservation operations. Several are described below.

Conservation Technical Assistance is the cornerstone for most agency activities. The fiscal year 1995 appropriations were \$500,006,000; the fiscal year 1996 comparable appropriations are \$538,631,000; and the fiscal year 1997 budget request is \$565,353,000. As stated previously, this difference over fiscal year 1996 is due in large part to uncontrollable costs from inflation and pay costs, and costs to relocate NRCS operations to the USDA Service Centers, needed to maintain the program at the fiscal year 1996 level.

Conservation technical assistance provides technical assistance to land users, communities, units of State and local government, and other Federal agencies for planning and implementing solutions to natural resource problems. In the past dec-

ade, major strides have been made in reducing erosion; improving soil and water quantity and quality, air quality, pasture and range conditions; improving and conserving wetlands and woodlands; enhancing fish and wildlife habitat; and reducing upstream flooding. This assistance is based on voluntary local landowner cooperation and recognizes the value of educational, technical, and financial assistance. These principles apply as we are responding to individual needs and to nationally determined priorities. Still, more remains to be done. Also, because neither agriculture nor the environment is static, and both are constantly changing, the agencies and programs need also to be constantly evolving.

NRCS administers several cost-share programs and also provides technical assistance to individuals and groups participating in these programs and in the Agricultural Conservation Program (ACP), which is administered by the Farm Services Agency. During fiscal year 1995, NRCS provided technical assistance to approximately 814,000 producers and other land users, as well as to units of government. This resulted in conservation treatment on over 100 million acres of land, including cropland, rangeland, pastureland, woodland, and other land.

NRCS also provides technical assistance to implement a number of the provisions of the 1985 Food Security Act and the Food, Agriculture, Conservation and Trade Act of 1990, some of those addressed are highly erodible lands (HEL), wetlands (swampbuster), Wetlands Reserve Program (WRP), and Conservation Reserve Program (CRP). NRCS technical field staff help to make determinations as to highly erodible lands and wetlands, and assist landusers to develop and implement CRP plans as well as the conservation plans they need to meet the requirements of these two Farm Bills. It is appropriate to note that the 1985 and 1990 Acts have now been amended with the recent signing into law by President Clinton of the Federal Agricultural Improvement and Reform Act of 1996. Our agency is working with the Department as we begin to implement these changes and assess their impact on our technical assistance staff.

Conservation Compliance.—Since 1985, the Agency has devoted a significant portion of its technical assistance resources to helping farmers and ranchers meet conservation compliance provisions. With NRCS technical assistance, more than 1.7 million plans have been prepared covering about 142 million acres of highly erodible land, and 95 percent of those plans were implemented by the mandated deadline of December 31, 1994. Between 1985 and 1995, technical assistance was provided to an average of over a million decision-making land owners and users each year; one result is that soil erosion has been reduced by over a billion tons annually. By the end of fiscal year 1995, all the highly erodible plans were installed.

Preliminary 1995 Status Review data show that approximately 48 percent of farmers have conservation systems that are at sustainable levels of soil loss or levels that allow soil to be created at a faster rate than it is lost. However, 36 percent have conservation systems that maintain soil erosion losses that range from one to two times soil loss tolerance levels annually; nearly 10 percent have conservation systems at two to three times soil erosion tolerance levels annually; and 6 percent maintain conservation systems in excess of three times the soil loss tolerance level annually. A substantial number, however, lack the kind of management and planning that will assure a sustainable quality and quantity of our valuable soil resource.

Beginning in 1995, all producers who receive USDA program benefits must be fully applying a conservation plan on highly erodible land. This does not end the need for NRCS to assist producers. Producers are regularly adjusting their farming operations to respond to weather conditions, infestations of weeds and insects, economic conditions, and agricultural commodity programs. These adjustments often require changes in their conservation systems and NRCS field staff are needed to assist producers with these changes. Conservation plan revisions may be needed for new conservation practices that farmers need, and our experience indicates that up to 20 percent of producers change their conservation systems each year. Although these producers have plans that meet the policies established for conservation compliance, they may not meet the needs of the land.

Wetland determinations and certifications.—On January 6, 1994, four Federal agencies with wetland protection responsibilities signed an historic Memorandum of Agreement recognizing NRCS as the lead Federal agency for wetland determinations on agricultural lands. Farmers now turn to NRCS for determinations that identify the extent of wetlands under both the swampbuster provisions of the 1985 and 1990 Farm Bills and Section 404 of the Clean Water Act. This new responsibility brought increased commitment of staff resources to provide prompt, accurate, and effective service to our Nation's agricultural land owners and users.

However, in April of 1995, the Secretary decided it was necessary to suspend all wetland determinations unless specifically requested by the client, or when a poten-

tial violation occurs. This decision resulted from the likelihood of legislative changes in both the Food Security Act and the Clean Water Act (CWA) on the wetland definition. The decision froze all current determinations and halts the process of providing wholesale wetland resource information to customers unless they specifically request it. Landowners have continued to request a limited number of wetland determinations and these requests are expected to increase as these issues continue to play themselves out in Congress. However, it should be noted that this delay has not decreased any responsibility of NRCS under the swampbuster provisions of the 1985 or 1990 Farm Bills or changed any responsibilities agreed to under the Memorandum of Agreement. In reality, with the clarification of wetland protection goals through the new Farm Bill and pending CWA legislation, it is likely that landowner request for wetland determinations and delineations will create a compounded workload requirement on the agency.

Grazing Land Conservation Initiative (GLCI).—This grassroots-driven initiative has helped NRCS better define the resource needs and benefits generated when grazing lands are improved. NRCS has been requested by this group to continue technical assistance to livestock producers on private grazing lands. Grazing lands include rangelands, pasture, hayland, and grazed forest lands. The latest 1992 National Resources Inventory (NRI), shows that grazing lands—mostly rangeland and pasture—represent 642 million acres, or almost half of the non-Federal lands in the United States.

The NRI analysis of range vegetation shows that over 15 percent of non-Federal rangelands are in poor condition; over 44 percent are in fair condition; 34 percent in good condition; and only 6 percent in excellent condition. The NRI indicates that 75 percent—nearly 299 million acres—of non-Federal rangelands need conservation treatment. Properly managed grazing land represents a renewable resource for producing food and fiber. Vegetative cover on well-managed grazing lands contributes to: 1) increased water quality and quantity; 2) improved wildlife habitat; 3) reduced soil erosion and sedimentation; and 4) improved riparian areas. Conservation Operations will continue to support technical assistance for these unmet conservation needs and will provide additional assistance within current funding levels as the field level workload permits. In fiscal year 1996, NRCS was able to provide enough resources to this initiative to ensure each of the 50 states has access to a Grazing Land Conservation Coordinator. This will enable us to provide multi-resource technical assistance to support grazing lands conservation and water quality improvement on rangelands and begin the process of rebuilding the agency's expertise in rangeland conservation, a capability demanded by our customers.

Service Center Implementation. a customer-oriented initiative within USDA, will continue in 1997 within currently budgeted funding levels. It will improve delivery of services in USDA field-delivery programs through improved business process re-engineering (BPR) and information systems integration. Service Center Implementation will coordinate planning, acquisition, development, implementation, and management of information technology resources. Service Center Implementation benefits agency and customer partnerships by: 1) providing one-stop shopping to multi-agency programs; 2) significantly reducing paperwork required of customers and employees; 3) facilitating data sharing; and 4) reducing repetitive requests for information.

One of the areas where BPR has resulted in significant positive change in a core NRCS business process is in the design, construction, and implementation of the agency's Field Office Computing System (FOCS). This system, developed by re-engineering the natural resource conservation planning model, steps away from the single resource plan used for Food Security Act compliance with its intensive record keeping requirements, and enables a much more holistic, natural resources oriented planning process for protecting and enhancing soil, water, air, plants, and animal resources while preserving agricultural profitability for farmers and ranchers. Literally hundreds of employees, customers, and partners were involved in this five year effort that is now coming to fruition. FOCS and the core conservation planning process it automates will be merged into the concept of the USDA Field Service Center within the Service Center Implementation interagency business and information strategic plan.

New technology.—Most of the natural resource information used by NRCS is referenced to a geographic location on the ground, and there is a need to put this data in digital form for more accessible use in a geographic information system (GIS) available at state and field offices. This will improve customer service by providing more usable and accurate information for use in natural resource planning and decision-making, and for environmental assessments and evaluations. It will also reduce duplicative work done with the same customers in the USDA Service Center. Currently, about 200 NRCS field offices are using GIS. We are embarking on an impor-

tant review of the information NRCS collects to assure that it meets the real resource information needs of farmers and ranchers. As part of this effort, we also are working on improving interagency cooperation, and the ways in which we share and display natural resource, economic, and other data so they conform to the national GIS database standards. Increasing the availability of such data is necessary for USDA reorganization and reinvention at the field level.

Under the 1977 Resources Conservation Act (RCA), USDA, through NRCS, with the assistance of nine other Federal agencies, conducts and analyzes ongoing comprehensive inventories and assessments of the status, condition, and trends of America's natural resources on all non-Federal lands. This information is used by USDA, other Federal agencies, State and local governments, and other organizations to support agriculture and conservation policy development and program evaluation. NRCS is working to assure the RCA Appraisal addresses the distinct characteristics of the regions of the country. The agency also will be developing, in the next 18 to 24 months, the third National Conservation Program, also called for under the RCA.

USDA Centers of Excellence initiative.—USDA will continue to work in partnership with the 1890 Land Grant Institutions and Tuskegee University, to develop low cost conservation systems to improve water quality and reduce erosion. USDA is establishing Centers of Excellence at the 1890 schools. NRCS and the 1890 Institutions have a history of cooperative ventures that have provided knowledge and skills necessary to strengthen and broaden the application of technologies to the limited resource and socially disadvantaged farmers they serve. It is more economical and efficient to support the Centers of Excellence with the universities than developing that capacity within USDA. The focus of the proposal is to develop and evaluate sustainable ecosystems that would improve and protect water quality and quantity. NRCS will continue the current level of support for this initiative.

Increased assistance to Native Americans.—Many of the more than 310 reservations covering more than 50 million acres in the 48 contiguous states, four areas of trust land, 12 Alaska Native Regional Corporations and 217 Alaska Native Villages have been requesting technical assistance. We estimate receiving 150 requests to establish tribal land field offices each year. Staff in those offices provide basic technical assistance for resource problem identification and conservation planning and application. NRCS plans to provide technical assistance and capacity-building assistance needed on a full-time basis on Indian lands that have significant natural resource problems, within the current funding level as workload in the field permits. This assistance will begin the process of developing local capacity in natural resources management by establishing an internship/self reliance program similar to the one in operation at the Wind River Reservation in Wyoming. Tribal employees will be trained through on-the-job and educational experiences as a conservation work force on Indian lands. No additional funds are requested for this activity for fiscal year 1997, but additional assistance will be provided to this high priority activity to the extent possible within requested funding levels.

Snow survey and water supply forecasts provide western states and Alaska with vital information on summer water supplies. The fiscal year 1995 appropriations were \$5,643,000; the fiscal year 1996 appropriations are \$5,852,000; and the fiscal year 1997 budget request is \$5,910,000. NRCS field staffs provide necessary leadership, standardization of procedures, and automation to a partnership of Federal, State, and local personnel to collect snow-pack data from more than 1,200 remote high mountain sites. Data are collected with many partners, including Conservation Districts, Bureau of Indian Affairs, Bureau of Land Management, Forest Service, the National Weather Service, Army Corps of Engineers, Bonneville Power Administration, and many State and local entities both public and private. After compiling and analyzing the data, NRCS is able to provide snowpack estimates and water yield on a monthly basis throughout the snow melting period. The knowledge gained through this effort supports critical decisions on billions of dollars of agricultural production, municipal water supply, hydroelectric and industrial water supply, flood control, and water flow requirements for fish and wildlife. This modest program contributes substantially to the economic and environmental well-being of a very large part of the country.

Soil Surveys provide the public with local information on the uses and capabilities of their soil resources. The fiscal year 1995 appropriations were \$72,632,000; the fiscal year 1996 appropriations are \$76,735,000; and the fiscal year 1997 budget request is \$77,684,000. Soil surveys are based on scientific analysis and classification of soils and are used to determine land capabilities and conservation treatment needs. The published soil survey for a county or designated area includes maps and interpretations with explanatory information that is the foundation of resource policy, planning and decision-making for Federal, State, county, and local community

programs. Homeowners and landowners also use soil survey information when making decisions. Soil surveys are conducted cooperatively with other Federal agencies, land grant universities, State agencies, and local units of government who contribute funds and staff.

Soils information has been gathered for many years and is primarily contained in published soil survey manuscripts and maps. There is a need to create digital orthophotography of the U.S. for use in geographic information systems (GIS). NRCS has the leadership role for coordinating the development, maintenance, and distribution of a modernized digital soils data base. Geographically referenced digitized soil survey data, converted into orthophoto maps, provide the accurate reference base needed for computer-assisted conservation or natural resource planning. This will provide the accurate reference base needed for geographic referenced data sharing. In addition, digitizing the soil surveys provides efficiency when updating and maintaining the soil survey data.

Plant Material Centers assemble and test plant propagation and the usefulness of plant species for biomass production, carbon sequestration, erosion reduction, wetland restoration, water quality improvement, stream bank and riparian area protection, coastal dune stabilization, and to meet other special conservation treatment needs. The fiscal year 1995 appropriations were \$8,070,000; the fiscal year 1996 appropriations are \$8,875,000; and the fiscal year 1997 budget request is \$8,963,000. Plant materials represent inexpensive, long-term conservation solutions to many environmental and natural resource problems and their maintenance costs are usually low. Many landowners and managers willingly use plant materials, if available, to meet their conservation needs.

The work at the 26 centers is carried out cooperatively with State and other Federal agencies, commercial businesses, and seed and nursery associations. Plant Materials Centers play an important research and development roles since most commercial nurseries will not develop new plant materials due to limited markets, but will grow and market the stock once a dependable plant has been developed. After species are proven, they are released to the private sector for commercial production.

WETLANDS RESERVE PROGRAM (WRP) is a voluntary incentive program to assist owners of eligible lands to restore and protect wetlands. Under the WRP, the Secretary of Agriculture acquires easements, develops wetland restoration plans, cost shares the restoration, and then monitors maintenance of the easements. Close cooperation with other Federal and State agencies and private conservation entities is an integral aspect of program delivery. The fiscal year 1995 appropriations of \$92,310,000 provided technical assistance and payments to landowners; the fiscal year 1996 appropriations of \$77,000,000 and the fiscal year 1997 budget request for \$188,000,000 are for payments to landowners and to provide them with the technical assistance needed to enroll their land in the program. The fiscal year 1994 program was limited to 20 states and an acreage enrollment cap of 75,000 acres. The fiscal year 1995 program has no state limitation and was allowed to exceed the 100,000 acre enrollment cap, to the extent funds from prior years permitted. The intent is to offer the program in all 50 states. The estimated acreage to be enrolled in fiscal year 1996 should be approximately 100,000 acres. The fiscal year 1997 budget request will ensure that the program continues to be available in all States allowing for the enrollment of an estimated 226,200 acres of permanent and 30 year non-permanent easements. Under current law 975,000 acres must be entered into the program by the end of the year 2000.

The program is one of the most comprehensive wetlands restoration efforts ever implemented. It will ultimately result in more wetland restoration than has been implemented by Federal and State agencies combined during the past 50 years. The program serves as the cornerstone of efforts to achieve a no-net-loss of wetlands and to move into the net-gain arena. It is the Nation's primary non-regulatory wetlands conservation program.

The program preserves, protects, and restores valuable wetlands mainly on marginal agricultural lands. Wetland restoration improves water quality and provides flood water retention, ground water recharge, open space, and aesthetic values. The improvement of habitat conditions for migratory birds, and other wildlife is also an important program focus.

Landowner response to the fiscal year 1992 and fiscal year 1994 limited WRP sign-ups was exceptional. Because of the intense interest, there were applications for over 200,000 acres of easements, beyond the funds available, that could be entered into the program in fiscal year 1995. This could increase to approximately 350,000 acres by the end of fiscal year 1996, over and above the 100,000 acres that we expect to enroll in the program during this year. The fiscal year 1997 proposal

will work to address this high degree of interest in the program and meet the mandated enrollment goal.

WATERSHED and Flood Prevention Operations is the first and only national program that helps local organizations plan and install watershed-based projects on private lands. It provides site-specific technical expertise and locally based watershed planning and financial assistance for plan implementation. The Watershed Program provides a process to solve local natural resource problems and avoid excessive regulation. The fiscal year 1995 appropriations for Public Law 534 and Public Law 566 were \$70,000,000; the fiscal year 1996 appropriations are \$100,000,000; and the fiscal year 1997 budget request is \$116,036,000. Additional funds, in the amount of \$15,000,000 will greatly improve our emergency response capability and enable us to immediately provide assistance to repair flood damage in a watershed without having to wait for a supplemental appropriation. The remainder of the increase is for uncontrollable operating cost for pay and inflation. The authorized purposes of watershed projects include watershed protection, flood prevention, water quality improvements, soil erosion reduction, rural, municipal and industrial water supply, irrigation water management, sedimentation control, fish and wildlife habitat enhancement, wetland creation and restoration, and public recreation. The program empowers local people as decision-makers, builds partnerships and requires local and State funding contributions and ownership.

The program has been subject to what I view as legitimate criticisms in recent years. However, I do not agree with those who would attempt to end the program. While I agree fundamentally with those who have criticized the historical use of large dams, reservoirs, and channelization to achieve flood management as destructive of many natural processes and functions in treated watersheds, I do not believe the program as currently administered should be scrapped. Judicious use of physical works to protect and manage watersheds can be constructive—both to natural systems and for protecting farm land from serious harm. For instance, the 1994 Gallo-way report on floodplain management shows that during the 1993 Midwest Flood, the Small Watershed Program was credited with avoiding \$400 million of damages to population centers, agriculture, and industry. USDA farm program disaster payments were significantly less in watersheds that had been treated with conservation measures through this program. This was also the case with Tropical Storm Alberto in parts of Florida, Alabama, and Georgia.

The agency administers this program by authorizing local sponsoring organizations to begin the development of a plan. In fiscal year 1994 and fiscal year 1996, of the planning starts authorized, most were requested primarily to improve water quality from agricultural sources and to benefit fish and wildlife habitat. The remainder identified water quality as secondary purposes. Proposed project actions include agricultural waste management, nutrient and pesticide management, and other land treatment measures. An example is in Alaska where the first watershed project authorized under this program is improving water quality to protect critical salmon spawning habitat. This project is important because it protects salmon as a subsistence food source for Alaskan Natives and for the fishing industry on the coast.

Early last year, the agency completed a Phase I review of authorized projects. With the agreement of everyone involved, including project sponsors, more than 500 dams and 1,800 miles of stream channel modifications were deleted and many other projects had previously planned measures replaced with more up to date and environmentally sound measures for watershed restoration. We are currently completing Phase II of this review during which the remaining projects are being given a more rigorous review, using the team approach, at the local level. This second phase review has, to date, deleted an additional 135 dams and 930 miles of stream channel. This brings the total to 635 dams and 2,730 miles of stream channel modification removed from current watershed plans, while maintaining the overall goals of those plans. It is important to note as well, that the process has identified and appropriately closed out 76 projects with additional projects being review for closing with the local sponsors.

The agency has undertaken a comprehensive effort to reevaluate the program and is in the process of refocusing it to approach watersheds in a more comprehensive, ecosystem-based fashion, involving all local people with a stake in the outcome, in the broad range of land use and conservation issues. Priority will be given to watersheds where local people have identified the need for natural resource restoration, water quality improvement, restoration of fish and wildlife habitat, and flood damage reduction. Watersheds located in agricultural and rural community settings with low-income and socially disadvantaged farmers, as well as those serving Native Americans also will receive priority. NRCS will ensure that assistance to local leaders through the Small Watershed Program is supported by appropriate Federal

partnerships, is compatible with national natural resource issues and complements State and local priorities. The 1997 budget proposal would provide no additional funds for flood prevention work under the authority of Public Law 534, but would continue work on the remaining high priority projects that would qualify for assistance under the authority of the Small Watershed Program (Public Law 566).

The *Emergency Watershed Protection (EWP)* program provides assistance to reduce hazards to life and property in watersheds damaged by severe natural events. An emergency is considered to exist when floods, fires, droughts, or other natural disasters result in life and property being endangered by flooding, erosion, or sediment discharge. The fiscal year 1994 funds available, appropriated as emergency funds under the Budget Enforcement Act, were \$340,500,000 with \$83,276,759 available from current and prior years' appropriations. These funds were available for emergency watershed protection work until expended. NRCS used nearly \$133,200,000 in fiscal year 1994, with an additional \$23,000,000 being transferred to the Farm Service Agency for the Emergency Conservation Program. In fiscal year 1995, an additional \$133,800,000 was used for emergency watershed protection work. In the latter part of 1995, October through December, an additional \$98,800,000 was used, for emergency work, with the last \$35,500,000, of the approximately \$423,000,000 total, released to the agency in January of this year. EWP was utilized during the Midwest Floods in 1993, western wildfires, and Tropical Storm Alberto in 1994, and floods in California and the Southeast in 1995. This year, we are completing work from last year, as well as, preparing for work in the Northwest flood states and Northeastern states impacted by this winter's blizzards. The Administration has recently requested a supplemental appropriations which will provide the funds necessary for relief efforts in the Northwest and Northeast and to purchase wetland easements in the Northwest.

During the past eight years, the program has been needed and used in an average of 26 states per year. Technical and financial assistance under the EWP program is available for small-scale, localized disasters not necessarily declared as national in scope. Among the emergency activities, generally performed with temporarily employed local labor, are disaster cleanup and subsequent rebuilding; restoring stream corridors, wetland and riparian areas; establishing quick vegetative cover on denuded land, steep land, and eroding banks; opening dangerously restricted channels; repairing diversions and levees, and assisting the Federal Emergency Management Agency when it plans and relocates communities away from floodplains. The administration has requested Congress provide an additional \$100,000,000 in supplemental EWP funds for use in providing assistance to areas affected by the recent Northwest floods and Northeast blizzard. In fiscal year 1997, we are requesting \$15,000,000 in EWP funds to address exigency needs with annually appropriated funds instead of having to delay assistance while waiting on a supplemental appropriation.

RESOURCE CONSERVATION AND DEVELOPMENT (RC&D) is a program initiated and directed at the local level by volunteers. The fiscal year 1995 appropriations were \$32,845,000; the fiscal year 1996 appropriations are \$29,000,000; and the fiscal year 1997 budget request is \$29,377,000. Each RC&D area encompasses multiple communities, various units of government, municipalities, and grassroots organizations. The RC&D's represent an unusual approach for helping citizens address multi-jurisdictional natural resource and community development issues. NRCS provides coordination to the program which serves as a catalyst for these civic oriented groups to share knowledge and resources, and it leverages public and private funds to solve common problems—including economic development—in a given area. Assistance is obtained from the private sector, corporations, foundations, and all levels of government. Historically, every dollar of NRCS technical and financial assistance from this program and applied directly to local projects, has been matched by about \$13 from other sources. In fiscal year 1995, RC&D areas completed 1,849 projects and Council members donated 511,000 hours of time. There are currently 277 authorized RC&D areas involving 2,016 counties across the country.

COLORADO RIVER BASIN SALINITY CONTROL PROGRAM supports the objectives of the Nation's commitment to the 1973 International Boundary and Water Commission Agreement concerning the quality of water in the Colorado River delivered downstream to users in the U.S. and the Republic of Mexico. The fiscal year 1995 appropriations were \$4,500,000; the fiscal year 1996 appropriations are \$2,681,000; and the fiscal year 1997 budget request is \$2,681,000. The fiscal year 1995 appropriations provided technical and financial assistance. As in fiscal year 1996, the fiscal year 1997 request will provide financial assistance to participants with technical assistance to support this program included in the Conservation Operations budget request. It is a voluntary incentive program that provides technical and financial assistance to farmers and ranchers to reduce salt loads into the Colo-

rado River system. Projects are underway in Colorado, Utah, and Wyoming. Participants make on-farm improvements to reduce surface run-off of irrigation water from cropland; reduce excessive deep percolation and seepage of irrigation water from conveyance systems, and improve water quality. The program has been successful in the establishment of new artificial wetlands and in improving upland wildlife habitat. Current efforts demonstrate that both on-farm and off-farm structural and nonstructural approaches are required to meet long-term objectives.

CONCLUSION

In closing, I would like to repeat comments Secretary Glickman made to the Agricultural Outlook Forum late last month here in Washington.

"In my first year as Secretary, I have seen first hand that managing natural resources is a serious and controversial business. Decisions we make today on resource use will have effects on people tomorrow and for decades to come."

"This is a very sobering experience. It is not like what I was used to in Congress. If we changed the 0/92 program or the Farmer-Owned-Reserve and it didn't work—no problem, we fixed it and then that's it: no more problems."

"But when you make major changes to conservation strategy and lose soil, you can't change the legislation to get it back because it's gone."

"The same with water quality—if Congress guts swampbuster and water quality suffers for all Americans, can we ever regain the quality? And if so, at what cost?"

"I don't think many Americans want to test nature this way."

I don't think I could better express the importance of what we are here for today, or better stress appreciation for your commitment to appropriate natural resource protection in this country.

Thank you, Mr. Chairman. We will be happy to respond to your questions.

(In thousands of dollars)

360

Total, watershed and flood prevention operations	70,000	100,000	+ 1,322	+ 15,000	- 286	116,036
Colorado River Basin salinity control	4,500	2,681	.....	.....	.....	2,681
Forestry Incentives Program	6,625	6,325	.....	.....	.....	6,325
Water Bank Program	890	.....	.....	.....	.....	.....
Great Plains Conservation Program:						
1. Cost-sharing assistance	6,060	.....	.....	.....	.....	.....
2. Cost-share programming and contract administration	2,916	.....	.....	.....	.....	.....
3. Technical assistance	6,196	.....	.....	.....	.....	.....
Total, Great Plains Conservation Program	15,172	.....	.....	.....	.....	.....
Resource conservation and development:						
1. Technical assistance	30,321	28,940	+ 453	.....	- 76	29,317
2. Financial assistance	2,464	.....	.....	.....	.....	.....
3. Loan services	60	60	.....	.....	.....	60
Total, resource conservation and development	32,845	29,000	+ 453	.....	- 76	29,377
Agricultural Resource Conservation Demonstration Program (Farms for the Future)						
Subtotal, NRCS appropriated funds	832,209	859,099	+ 18,578	+ 145,034	- 3,194	1,019,517
Rural Abandoned Mine Program	(7,853)	.....	.....	.....	.....	.....
Trust funds	118	447	.....	.....	- 44	403
Total, Natural Resources Conservation Service	832,327	859,546	+ 18,578	+ 145,034	- 3,238	1,019,920
Ceiling staff-years	12,163	12,457	.....	.....	.....	12,163

Note: Fiscal year 1995 dollars for the Water Bank Program were originally appropriated for the Wetlands Reserve Program. Beginning in fiscal year 1996, the technical assistance dollars for the Colorado River Salinity Control Program are reflected in the Conservation Operations Program.

NEW FARM BILL

Senator COCHRAN. Mr. Secretary, we appreciate your statement, particularly with respect to the provisions of the new farm bill as they relate to conservation. I have heard that this bill, recently passed by the Congress and signed by the President, is one of the strongest commitments to conservation that has ever been seen in agriculture legislation. I hope that is true.

It is certainly, I think, reflective of the views of those who worked on the bill on the Senate side that there has to be compatibility between production agriculture and conservation. It does not have to be inherently incompatible. Some view it as such. Many who view themselves as environmentalists try to oppose things that production agriculture seeks, and vice versa.

So I think it is an opportunity to demonstrate that there can be true progress made in enhancing the compatibility between production agriculture and conservation. I hope this works out to be the case. I know the administration is going to have a lot to do with that and the way that comes out in the way that it draws the regulations and enforces them and encourages compliance, makes sure the incentives work as incentives rather than mandates or regulations or the like. So I am encouraged. I am glad to hear that you are, as well.

REORGANIZATION

Let me ask you a question about the status of the reorganization of the Department. I know the agencies that come under your jurisdiction have been in the process of consolidating and redefining roles and missions, trying to streamline the organization so that it can function more efficiently and effectively. What is your view about the status of the reorganization and what has been the effect of the reorganization on the delivery of services by the agency?

Mr. LYONS. Well, Mr. Chairman, I think the reorganization, as it has been implemented to date, has helped us be more efficient, has helped us provide better services to agricultural producers through the production of service centers and creation of the one-stop shopping approach. This farm bill, though, changes significantly the roles of some of the agencies in the Department of Agriculture. It certainly impacts on how the Farm Service Agency might implement its responsibilities down the road.

So as a result of the passage of the farm bill, we are in the process of reevaluating some of the proposed restructuring, as well as how we might go about putting in place new service centers, to make sure that the new roles and responsibilities that are spelled out in the farm bill are consistent with our thinking prior to the farm bill with regard to reorganization. So we are going to take, I think I would say, a more cautious approach to make sure we do things right and are consistent with the new direction that has been spelled out for the next 7 years.

Senator COCHRAN. Mr. Johnson.

Mr. JOHNSON. Yes; if you would allow me, first of all I would like to recognize two other Deputy Chiefs I have with me, Sherm Lewis, on my left here, is our Deputy Chief for Management, and Rich Duesterhaus, on my right, for technology.

The question as it relates to our own agency and its restructuring, we believe that we are on the right track with our restructuring, and have made terrific progress in that regard. In going through this, though, we have disrupted our service in some arenas, because we had to reduce our numbers. We bought out close to 1,500 people, and we are in the process right now of restructuring to make sure that we get those people back to the field, and our plans are calling for 80 percent of our work force to be in the field, and we intend to be there by the end of this year. We are moving very quickly in that regard.

If you would allow me, I would like my associate Pearlie Reed, though, to maybe comment on an effort we have underway right now to assess exactly where we are in this reorganization.

Mr. REED. Thank you, Chief Johnson.

REORGANIZATION IMPLEMENTATION APPRAISAL

Mr. Chairman, what Mr. Johnson is referring to is we are in the process right now of going through what we are calling reorganization implementation appraisals, and we are taking a look at headquarters, the regions, the State operations, all the way down to the field, taking a look at the service centers, everything that we have done, to see what midcourse corrections are needed, what is going on that is good that we need to share throughout the system, what is going on that needs improvements so that we can make those improvements systemwide. We should complete that process by midsummer, and I think we would be happy to share a summary of that with you.

Senator COCHRAN. Well, I am encouraged to hear about that. I think it is important to do that and to get some feedback from those who use the services of the agency and get their input. Is there a part of this that involves discussing these changes with those who you deal with, the farmers, the landowners, the groups out in the country?

Mr. JOHNSON. Yes; as a part of the process we are including farmers and conservation partnerships, State conservation agencies, conservation district officials, our field employees, and employees of other agencies, in the process, getting their feedback, and their recommendations and concerns will be incorporated into what we do in the future.

NRCS INDEPENDENCE

Senator COCHRAN. I speak to groups of conservation district members and State organizations and others from time to time, and one of the impressions that I have gotten recently is that there is an interest in having more independence of this agency from the Department. Is that something that is being considered or discussed at the Department level or at your levels, or is this something that is just being hoped for out there in the field?

Mr. LYONS. Well, now you frighten me, Mr. Chairman. I am not sure what is going on out there. We are proud of where we are in conservation in the Department. If anything, we have tried to emphasize the critical role that the Department of Agriculture plays in conservation. We have kind of been like the silent partner in conservation across the landscape.

If you think about it, in my area, my mission area in the Department of Agriculture, and that is resources and environment, constitutes one-half the employees in the Department, between the Forest Service and NRCS. And if you think of the role the Forest Service has both in dealing with public lands, 191 million acres of public lands, as well as their role in working in State and private forestry with private landowners and the role that NRCS plays, we as the Department affect more of the United States landscape than any other department or agency of Government, any corporation, or any private landowner.

So we have been trying to emphasize USDA's positive role in promoting conservation, hopefully not fostering a sense of the need for further independence, but rather giving more recognition to the valuable role the agencies play as part of the USDA team.

BUILDING PARTNERSHIPS

Mr. JOHNSON. I would like to add to that, we are working very hard at trying to build the partnership with particularly the conservation districts and State agencies out there. We just went through a new signing of our memorandum of understanding that began back almost 60 years ago now. We set up in this country a delivery system that depends on local control and local input through our conservation districts. And over the last 2½ to 3 years, we have done everything we can to try to strengthen and encourage that part of it.

My view of conservation is that it has got to be driven from every single heart and every single soul in this country and every single landowner in this country. And that works up through the system. So rather than here in Washington says this is how the world is, we have a program that is driven from the local level, and I hope that you are hearing some of that independence in that light.

CUSTOMER INPUT

Mr. LYONS. I would emphasize, Mr. Chairman, just, I think, for clarification, I think we have attempted, more than any other administration I have seen, not meaning this to be a partisan statement at all, but to try and involve landowners and local interests in the processes of determining what we wanted of a farm bill through 350-plus listening forums we held prior to putting together our farm bill recommendations, and we shared, of course, that information with your staff and with others in the Congress.

And as we go to the rulemaking phase here, rather than simply sitting down and drafting rules, next week we are going to hold a series of listening forums again. We are going to go back to the same locations and the same people we talked to prior to the farm bill, and we are going to ask them what they think of the new farm bill and how they would like to see it implemented to address their needs locally.

We think that kind of input reflects the value of the partnership and the strength of conservation programs which are at the ground, they are not in Washington, DC.

IMPLEMENTATION OF FARM BILL

Senator COCHRAN. Already, you are going to be receiving some suggested proposals for implementing the Wildlife Habitat Incentive Program, which you mention in your statement, that we included in the Senate bill and the conferees agreed on and it made its way through to the final provisions of the farm bill. I think rather than spending months and months, though, getting input, you need to go ahead and implement these programs. And the quicker you can do that, I think the better off everybody will be, and the impact can be felt and people can start deriving the benefits of this legislation. In particular, I would encourage you to work expeditiously with those who have a keen interest in this, and try to make sure that you get the regulations out as soon as possible.

Let me say in that connection, do you anticipate any changes that would be made in your budget submission because of provisions that are included in the farm bill? Do you see the need to make a substantial change in what you have submitted as a budget request, or are you going to submit an addendum? What is your plan with regard to that?

BUDGET REVISIONS

Mr. JOHNSON. Most of our budget is in what we call conservation operations, the technical assistance that we provide across the country. We do not see major changes in that, although we want to be very careful. In 1985, when the farm bill passed, we took on a very large additional responsibility, and we did not bring on sufficient people to deal with that so we had to move people from one part of the country to the next, and that means we left behind some work that has somewhat languished over the last 10 years.

We want to be very careful, as we look through the workload that this farm bill is going to give us, that we make sure that our conservation operations are very strong in that regard. That is the area that I see the major change in, and as we put together these programs we are going to get a good assessment of that and hope to get that to you very soon.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

Senator COCHRAN. Another new program that was created by the farm bill is the Environmental Quality Incentives Program. This combines several other programs: the Agriculture Conservation Program, the Water Quality Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. For fiscal year 1996, approximately \$78 million were appropriated for those programs. My question is, What is the budget request going to be—you may not have this right now—for funding those programs? The budget, for example, does not contain any specific request for the Great Plains Conservation Program. I am curious to know what funds you plan to allocate to that, if any, and to the other elements of this new Environmental Quality Incentives Program.

Mr. JOHNSON. Actually, we are discussing that right now with our sister Agency, the Farm Services Agency. I believe that our appropriations last year, if you put ACP, WQIP, and Colorado Salin-

ity together, was about \$78 million. This farm bill adds another \$130 million, and the directions that I believe that it gives us are to begin the EQIP-like components of those three programs.

The Great Plains program does continue because it is a multiyear program, and although we have had no new signups in this last year, we still have the structure in place to do that. In fact, the Great Plains program is very similar to EQIP. It is a multiyear program. It deals with many of the conservation issues on an individual farm or ranch. So we see a real opportunity here to, in the spirit of EQIP, be able to fulfill some of the needs that are out there with the Great Plains program.

But in terms of the actual division of work and how we shift the present programs in EQIP within fiscal year 1996, we are still discussing that with FSA.

THE FOUNDATION

Senator COCHRAN. Let me ask you about the status of the pilot program which you began to implement the Wetlands Reserve Program by nongovernment entities. You were reaching out and involving other resources and organizations to help better protect wetlands. What is the status of that? What is the impact on the budget? Is this turning out to be something that you intend to expand, or what is your impression of it so far?

Mr. JOHNSON. If you would let me, I would like to turn that question to Tom Weber, who is in charge of our programs. I think he can give you an up-to-date assessment of that.

Mr. WEBER. Thank you, Chief.

Mr. Chairman, we have entered into an arrangement with the Fish and Wildlife Foundation for about \$5 million this last year. What we are trying to do is leverage that Federal money with private money and foundation money to acquire wetland easements, primarily from those applications that we have on hand, but we are looking at other areas that we could acquire as part of the WRP process, and we found it to be very successful to this point. We are going to evaluate that, however, by the end of the year, to see if it is something that we want to continue.

Senator COCHRAN. I know from my experience in wildlife refuge development and enhancement, a tremendous amount of participation has been attracted to that effort which has resulted in enormous sums of money being contributed by private foundations, individuals, and a lot of volunteer participation in terms of policing and monitoring and helping provide guide service and the like out in the wildlife refuge system. I was curious to know whether or not you see the same kind of possibilities for the Wetlands Reserve Program, or any of the other conservation activities administered by this agency.

Mr. LYONS. Well, in fact, as you know, Mr. Chairman, the 1995 farm bill created the Natural Resources Conservation Foundation, which is modeled after the National Fish and Wildlife Foundation and the National Forest Foundation. The purpose of that independent entity is to provide a mechanism or vehicle to receive donations, and in fact further some of our conservation efforts, and we see the private interests in contributing to the conservation nationwide as an untapped opportunity that we hope the Foundation will

help us tap into and supplement some of the resources we have, as well as help to initiate new ideas and new programs to further conservation.

Senator COCHRAN. Mr. Johnson.

VOLUNTEER PROGRAMS

Mr. JOHNSON. Yes; we do have a voluntary program going within our Agency right now called Earth Team, and we have over 12,000 individuals taking part in that across the country.

Specifically with the Wetlands Reserve Program, though, we are reaching out in many ways, forming many new partners with groups like Pheasants Forever and Ducks Unlimited. In some States, we are even partnering with school districts to get biology classes connected with farmers where they want to be to monitor and work on the restoration of these wetlands.

So there are terrific opportunities here. And although we have had a good program going in the past, we see real opportunities to improve on it.

Senator COCHRAN. The Senator from Nebraska.

CONSERVATION ON PRIVATE LANDS

Senator KERREY. Thank you, Mr. Chairman.

Mr. Johnson, as you know we have very high market prices right now, and I keep hearing at home stories of highly erodible pasture being torn up and put back into cropland, and I would like to have you talk to me a little bit about what you think is going on in the country at this moment and the implications for this committee as we make decisions about resources being made available for conservation on private land.

Mr. JOHNSON. I was home last weekend to plant some trees, and I drove from Chicago to northeast Iowa to my home, and this job is in one way really terrible in that I now look at every single field that I go by to see whether or not it is the way it ought to be. I can report that on that trip the vast majority of the land looks real good. We have made terrific progress in the last 10 years, and there is a pretty good carpet on the land across the country.

But I do share your concern. This is not a job that is completed and then we can sit back and say we have done our work. In fact, I asked my staff to put together some quotes from the 1930's and quotes from what is going on or what went on this spring in Oklahoma, Kansas, Texas, and part of Nebraska in fact. As you know, we have had very, very dry conditions, and although farmers have done a terrific job, we did rely a great deal on residue. And let me read two of those quotes to you, and I can put the whole paper into the record, because I think it is quite striking.

"Great Bend reported that western Kansas was darkened by the duststorm. Carried along by a wind out of the north, the tiny particles partly obscured the sun." That was Associated Press, March 15, 1935. In the High Plains Journal, March 11, 1996, "visibility in all directions was less than one-half mile. High overhead, the sun had been blotted out of the sky." And I will put into the record a whole series of these quotes, if you will allow me.

[The information follows:]

DROUGHT THEN, DROUGHT NOW

Already 5,000,000 acres of once-fertile farm land has been completely destroyed by wind erosion—shorn of the productive topsoil which is the very essence of its fertility. At least 60,000,000 acres are seriously menaced, and the danger is spreading with amazing rapidity. Many fields have lost as much as 16 inches of topsoil in the intense storms of the past 3 years; others have been stripped down to plow depth by the wind. [Hugh Hammond Bennett, in "Capital, Caught by Dust Storm, Turns to west's Topsoil Problem—Tons of Dirt from Central Plains Deluged the City," *The Washington Post*, Sunday, March 10, 1935]

While there's no modern-day Dust Bowl just yet, an inch of topsoil has been lost in many fields, and K-State agronomists set the erosion rate at more than 170 tons an acre. [Kansas City Star, February 24, 1996]

The damage to wheat was mounting rapidly . . . Erosion has already taken a large toll with much wheat blown out by the roots and more buried hopelessly in sand and dust drifts. [Amarillo (TX), *Globe*, March 4, 1935, quoted by Hugh Hammond Bennett, in "Capital, Caught by Dust Storm, Turns to west's Topsoil Problem—Tons of Dirt from Central Plains Deluged the City," *The Washington Post*, Sunday, March 10, 1935]

Dust clouds swirled like specters above the flatlands of Sumner County, blasting tiny green wheat shoots with grit sharp as a reaper's scythe. [Kansas City Star, February 24, 1996]

Oklahoma, Texas, Nebraska, Kansas, Colorado, and Wyoming bore the brunt of the 36-hour dust attack. Snow and dust were reported over sections of Minnesota and Wisconsin tonight. Damage to freshly plowed fields could not be estimated, but property damage was expected to be high. Wyoming sheep suffered seriously. [Associated Press, March 15, 1935]

In Texas and Oklahoma, grass fires rage across parched pastures. With feed supplies growing short, Texas cattlemen are feeding prickly pear cactus to their herds, first scorching off the spines. [Kansas City Star, February 24, 1996]

Time was when it was something of a joke to observe that one could stand on western Kansas plain any afternoon and see three states—Kansas, where one stood, Nebraska, when the wind blew south across the plains carrying Nebraska dust with it, and Oklahoma, when the wind would change and blow north carrying Nebraska dust back with Oklahoma dust following. [Muskogee (OK) *Times Democrat*, March 1935]

"It can carry several hundred miles," said Mike Akulow at the National Weather Service in Topeka. "And if we don't get any rain, we could see some of that Oklahoma red clay coming our way." ["Dust sows seeds of doubt, fear," *Kansas City Star*, February 24, 1996]

At Liberal, Kans., traffic was blocked this afternoon by the dust storm. Darkness and poor visibility prevailed there and in neighboring Oklahoma towns most of the day. [Associated Press, March, 1935]

Dust clouds have so darkened the skies in western Kansas this winter that street-lights have come on at midday, while drivers on the Kansas Turnpike have switched on their headlights to make their way safely through the haze . . . [Kansas City Star, February 24, 1996]

Visibility, in all directions, was less than one-half mile. High overhead, the sun had been blotted out of the sky. [High Plains Journal, March 11, 1996]

Great Bend reported that western Kansas was darkened by the dust storm. Carried along by a wind out of the north, the tiny particles partly obscured the sun. [Associated Press, March 15, 1935]

One of the worst dust storms in history struck Salina shortly after 10:30 o'clock tonight. Wind which had been high all day became a gale. Dust was so thick it was impossible to see anything more than 10 feet ahead. Houses filled with a heavy coating of dust which drifted in every crevice and made breathing difficult. [Kansas City Times, March 15, 1935]

Dust clouds looming in the west. A haze that makes mid-day seem like dusk. Dust settling on furniture and floors in houses where doors and windows are firmly shut . . . Sounds like something from the 1930's, but it also describes events of the winter of 1995-96. [Saint Francis (KS) *Herald*, February 15, 1996]

If the 1934 drought has succeeded in waking up the country to the danger of soil erosion and the necessity of locking the barn door before all the horses are gone, it may eventually prove to have been a blessing in disguise, despite the appalling losses it has caused. [Los Angeles Times, March, 1935]

Mr. JOHNSON. The point is not that we are vandals out there or that we are not doing a good job. We are. But nature also deals

us a hand now and then that is really difficult to deal with. On the other hand we have millions of acres of CRP that could come out within the next couple of years. Commodity prices are high. I started farming in 1973, and that was the last time we had very high prices. In fact, in 1974, I believe we had \$10 soybeans. And we did go fence row to fence row, and when I took over my farm, the farmer that left it left that whole farm with gullies in it, and it took me 2 or 3 years to get those things pushed in and get the land healed again.

I think we have come a long way. I think farmers have much more experience on how to deal with these issues today, but our job is not done, and if we are not real careful, we could wake up 5 years from now and say we have slipped backward rather than continued to go forward.

EMPOWERING PEOPLE

Senator KERREY. It does seem to me, Mr. Johnson, that what we are doing is we are moving from a regulatory model to an incentive-based model, and that two things have to be done. One, we have to make sure that we come up with the financial resources that provide a sufficient financial incentive, because I do not think you can do conservation on the cheap.

And second, which is the next question I would like to get into, is I think we have to very aggressively empower people, give them the authority that the law does under EQIP. As you know, we put language in there that allows for expanded technical committees, both nongovernmental organizations and nongovernmental individuals, to participate in developing their own conservation plan. In the past, what we have seen, I think, is the State committee, the technical committee, and the FSA, they do not agree, all the way down to the county.

You have got the county resource district or county conservation district and the county committee, and they do not agree. And they bitch and moan and bitch and moan and they bump it upstairs. They call me or they call Senator Cochran and they want us to resolve their dispute. And I just think we have got to force that out there and say folks, this law gives you the power to make the decisions, and we want you to resolve the conflict before it gets to Washington.

You sit down in a room, you come up with a plan, everybody signs off on the plan, and then you send it to us. I mean, I really think we have got to force that kind of new decisionmaking, because the law does provide for a substantial amount of new empowerment, I think apropos of the answer that you gave the chairman earlier on wetlands, it can be very exciting for people to become empowered to do things that they previously were denied the opportunity to do, and I think both the providing of the resources and the providing of the power will be a very important part of making sure that as we move from a regulatory model to an incentive-based model that we do not literally lose ground.

Mr. JOHNSON. In response to your first statement, I believe the 1985 somewhat regulatory approach came out of the fence row to fence row in 1976 and 1975 when we had commodity prices as we have today. We have said that the voluntary approach works. I

think we have a window of opportunity now to show that it works. But you are right. We need the people on the ground. In 1976, we had over 15,000 NRCS employees across this country. Today we have only 12,000. So we have fewer land doctors out there, if you will, working on the health of the land than we had before.

I agree with you 100 percent that it has got to be driven from the local level. Decisions have to be made at that level, and we have found that where we have done that within the last 2 years, communities, farmers, and ranchers set for themselves higher standards than we would ever dare to set here in Washington. So it can work.

Senator KERREY. And can reach agreement. We have seen remarkable agreements signed off by Farm Bureau, Sierra Club, I mean, you force—not force, but give them the authority to do it and they will come up with plans that are in many ways better than what we could come up with.

Now, part of that is, I think, the education level has increased from what it was let us say 20 years ago; part of it is there is a technological capacity, and anybody with a Mac or a PC can process as much information as USDA used to do for them. Now we have got a lot of, I think, very exciting partnerships out there.

So I hope that the Secretary and you will both insist that we provide the resources for you and insist that out at the local level that they do take advantage of this law and not get back into the old school, which I think will be very frustrating, and I think frustrate our efforts to do good conservation. If they get back in the old school where they just bring it to us and say we cannot agree, I think we need to bump it right back to them and say get an agreement and send it to us.

Mr. JOHNSON. Well, let us cut a deal with you today that you provide the resources and we will live up to the second part of that. We will anyway, by the way.

Senator KERREY. The chairman has assured me we have done this song and dance before, but June O'Neill, the head of the CBO, is testifying this morning to the Senate Budget Committee, and chock full in her testimony are warnings about growth of entitlement programs and how that is going to restrict our ability to come up with appropriations for these kinds of things. I keep saying it over and over and over, but it is unquestionably true, if you straightline it out. Even in USDA's budget this year, we have got a \$3 billion increase in the mandatory programs as a result of the 7-year transitional payments and inflation-adjusted cut in appropriations for all the things the Department is doing.

I have got two statements that I would like to make that do not really require response. One is that under the law, and I think it is terrific, the farm bill removes all specific designations of conservation priority areas and lets the Secretary designate areas given the recommendations that are coming from the State. We have worked on a project in Nebraska called the Rainwater Basin. The Fish and Wildlife Service has been involved in it. When they started, the attitude out there toward Fish and Wildlife was sort of like my attitude toward the Viet Cong 25 years ago.

Again, it has been very exciting to watch a broad-based partnership of Federal, State, and local agencies and individuals working.

The Governor supports that designation as a priority area, and I hope the Department will act quickly on that designation so we can continue the project.

The next item, to which I want to alert the other members, the U.S. Department of Agriculture, using taxpayer money, as you have told me in my office, is purchasing images from the French in order to be able to come up with a presentation.

Mr. JOHNSON. I believe I told you that we could, not that we are.

Senator KERREY. Well, right now you have to. If you want to get images that are useful, you have to take taxpayer money and purchase it from the French because that is the only thing available. Even though our Government has produced superior images and could sell them to you, we are still—our security people in security agencies are moving very, very slowly at declassifying and making those images available. And it is a terrible waste of resources, taxpayers basically having to pay for it twice, and it could put American jobs at risk because of sales from private sector companies. And I hope that you will provide me with the specifications of need so that I can press those agencies to move quicker in declassifying it, because I just do not think the taxpayers should be asked, having paid for those images once, to buy them from the French because we are moving too slowly in declassification.

AGRIFORESTRY CENTER

Last thing, Mr. Johnson, again just a statement. We have had a forestry center, we have been working with the Forest Service trying to keep this agriforestry center at the University of Nebraska open. Senator Bond has made it a priority, as well. This does happen to be one of those deals that is located at the University of Nebraska, but it is used throughout the region. It has been a tremendous resource, and the customers are using it. And I hope that we are able to come up with the resources to keep that center alive.

I must say, I am surprised, and pleasantly surprised, at the amount of support. In some ways Senator Bond actually has taken the lead on this, because it has turned out to be vitally important to preserve, as well.

Thank you, Mr. Chairman.

Senator COCHRAN. The Senator from Arkansas.

Senator BUMPERS. Mr. Chairman, thank you very much. In relation to the last statement by the Senator from Nebraska, I hope every effort will be taken to maintain the Small Farm Research Center in Arkansas. Incidentally, they just named that after Arkansas' senior Senator.

Senator Bond came down and spent a day with me at that facility in Arkansas with which you are familiar, Mr. Johnson, and the concerns that Senator Kerrey has just voiced are very legitimate, very good. What they are doing in Booneville includes an agriforestry research project and I recommend that everybody go down and see it. It is absolutely staggering what they are able to do, what they are doing and what ultimately will happen there, by using trees like walnut trees, which have an unbelievable value when they are grown. It takes a long time.

What is a full-grown walnut tree worth, \$10,000? What is it?

Mr. JOHNSON. They can certainly be that, yes, or more.

Senator BUMPERS. It would be at least \$10,000, would it not?

Mr. JOHNSON. If it is a good one.

Senator BUMPERS. Of course, we are talking about 70 to 100 years, too, are we not?

Senator COCHRAN. What about an old fashioned hickory nut tree?

Senator BUMPERS. Well, if you are short on those, we have got plenty of them. [Laughter.]

NATIONAL CONSERVATION GOALS

Mr. Chairman, I will probably submit two or three questions for the record, but, Mr. Johnson, this might be a good time for you, if you could do it in fairly short order, to tell us what are our conservation goals, long-range goals, in this country?

Mr. JOHNSON. We talk a lot about the term sustainability, and we have some good information on what that means. For example, in soils and soil erosion we have pretty good science that says in order to maintain the productive capacity of the land, this is what we have to do.

We have goals when it comes to things like rangeland and pastureland. We have goals when it comes to water quality. And what I am trying to say here is that our goals are to have a healthy landscape and to have healthy agriculture, but at the same time to protect the productivity so that we can produce, as this world gets more populated.

When you look at our soil today on our highly erodible lands, about 140 million acres, only one-half of that is what we would call sustainable at this point.

Senator BUMPERS. One-half of it is what?

Mr. JOHNSON. Is what we would call sustainable. In other words, the replacement, natural replacement, is equalling what we lose, and I want to say right up front that nature——

Senator BUMPERS. How much land do we have in this country that is arable and tillable?

Mr. JOHNSON. We have about 450 million acres, I believe, of cropland.

Senator BUMPERS. What is the 140-million-acre figure you just used?

Mr. JOHNSON. That is the cropland that we are farming that we would consider the toughest to farm. But yet it is land that we can farm, and with the good systems that we have today——

Senator BUMPERS. Marginal from an erodible standpoint?

Mr. JOHNSON. Yes; primarily erosion.

We also, of course, have a great deal of land that is under irrigation, and there you have problems with salinization.

But the idea, the concept of sustainability is one in which we are constantly asking the question, are we farming this land in such a way that it can go on and on and on? It is good to sit here today and say that we are doing far, far better than we did even 10 years ago. But we do have a great deal of work yet to do.

As I say, we still have erosion rates that are higher than they ought to be, although they have been reduced by one-third in the last 10 years. We have rangeland and pastureland that needs improvement. We have water quality that is impacted by agriculture

that is less than what it ought to be, but even there, we have made terrific strides in the last 10 years.

We need to do a better job, though, of setting goals, and these goals have to be set by local communities, I believe. And I think what we have to be able to do is to, in Arkansas or in Mississippi or in Iowa, be able to say here is where we are on the range of possibilities, here is where we are today, here is where we were 10 years ago, but here is where we need to be if we want to continue to produce for this world and for our children and grandchildren. Here is where we want to be if we want a rich landscape that has wildlife, that has good water quality.

EMPOWERING COMMUNITIES

And what we are trying to do as an agency is to be able to come to you in Arkansas and say here is where we are. Then you set the goals. And I do not think you are going to set them lower than a sustainable system. Generally, we find when you do that you set them considerably higher than we would dare set them, because that is your home place, and you want it to be better. And we are moving out now to be able to do that much better, but we will do it based on the community, and the community, we hope, will set those goals.

We have some national goals, but I think the major goals that we are talking about are goals that you need to set in Arkansas, Mr. Kerrey needs to work to set them in Nebraska, you need to set them in Mississippi, and across the country.

SOIL LOSS

Senator BUMPERS. Mr. Johnson, I have made speeches, and I am sure the chairman has, too, where we have said partially sincerely and partially politically that we should not tell farmers how to handle their land because nobody has a greater interest in the sustainability of their land than they do. And I think in most cases that is true. Let us face it, some farmers do take a fairly short-ranged view for the biggest profits now, as opposed to what is the long-range best interests of themselves, even.

That is not to say that we ought to be paternalistic about it. But by the same token, I saw figures when I first came to the Senate that Iowa was losing their corn croplands and their tillable lands, that they were losing so many tons per acre per year of their topsoil.

Mr. JOHNSON. Probably about 9 or 10.

Senator BUMPERS. I had seen 16. When I was a youngster, my father-in-law used to buy cattle in Arkansas, really Jerseys, because Iowa was interested in butter fat and Arkansas was interested in quantity. So he would take Jerseys to Iowa, sell them and make \$100 a head on them, buy holsteins and bring them back to Arkansas and make \$100 a head on them.

Mr. JOHNSON. I milk Jerseys, by the way.

Senator BUMPERS. But he grew up in the sale barns of Iowa, bedding down with the cattle at night pending the sale the next day. But he told me that a lot of times—this was back in the 1940's and the 1950's—he told me that oftentimes a paved highway would be so muddy after a heavy rain you could hardly get down it. Topsoil

on the fields just flood out onto the highways. And I assume that Iowa is still the leader in the Nation in loss of topsoil. Is that a fair statement?

Mr. JOHNSON. I am not real sure right now, but I can tell you that it is far better today.

Senator BUMPERS. I do not see those figures anymore. I used to see the States, you know, and how much they were losing topsoil per year. Do you know the answer, Mr. Lyons?

Mr. LYONS. I could not tell you right off-hand, but we certainly could generate that for you.

Mr. JOHNSON. We will give you those figures.

[The information follows:]

ESTIMATED AVERAGE ANNUAL SHEET AND RILL EROSION AND WIND EROSION ON NONFEDERAL CROPLAND

[By State and year]

State/year	Sheet and rill erosion			Wind erosion			Combined erosion		
	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total
Alabama:									
1982	7.6	0.8	7.2				7.6	0.8	7.2
1987	6.4	.8	5.9				6.4	.8	5.9
1992	6.9	.5	6.2				6.9	.5	6.2
Arizona:									
1982 .....	.6	.3	.5	6.6	1.7	5.8	7.2	2.0	6.3
1987 .....	.6	.3	.5	10.6	.6	9.1	11.2	.9	9.6
1992 .....	.6	.2	.6	15.6	.8	13.0	16.2	1.0	13.6
Arkansas:									
1982	3.8	.7	3.7				3.8	.7	3.7
1987	3.8	.8	3.7				3.8	.8	3.7
1992	3.5	.6	3.4				3.5	.6	3.4
California:									
1982	1.3	.7	1.1	1.0	.6	.9	2.3	1.3	2.0
1987	1.1	.8	1.0	.9	.6	.8	2.0	1.4	1.8
1992	1.0	.4	.8	.8	.3	.6	1.8	.7	1.4
Colorado:									
1982	2.5	.2	2.2	13.3	2.9	12.0	15.8	3.1	14.2
1987	2.5	.2	2.2	13.0	2.4	11.7	15.5	2.6	13.9
1992	2.4	.3	2.1	11.5	1.4	10.0	13.9	1.7	12.1
Connecticut:									
1982	4.7	.8	2.7				4.7	.8	2.7
1987	5.8	1.5	3.3				5.8	1.5	3.3
1992	6.0	1.5	3.3				6.0	1.5	3.3
Delaware:									
1982	2.1	.6	2.0	1.2		1.2	3.3	.6	3.2
1987	2.0	.5	2.0	1.3		1.2	3.3	.5	3.2
1992	2.1	.8	2.0	1.2		1.2	3.3	.8	3.2
Florida:									
1982	2.4	.5	1.7				2.4	.5	1.7
1987	2.1	.3	1.4				2.1	.3	1.4
1992	1.8	.4	1.2				1.8	.4	1.2
Georgia:									
1982	6.3	.4	6.0				6.3	.4	6.0
1987	6.2	1.0	5.8				6.2	1.0	5.8
1992	5.5	.6	5.1				5.5	.6	5.1
Hawaii:									
1982	5.0	2.6	4.7				5.0	2.6	4.7
1987	5.1	2.4	4.7				5.1	2.4	4.7
1992	4.6	2.5	4.2				4.6	2.5	4.2
Idaho:									
1982	5.4	.4	4.4	4.2	.8	3.5	9.6	1.2	7.9
1987	4.8	.3	3.8	4.9	1.0	4.0	9.7	1.3	7.8

ESTIMATED AVERAGE ANNUAL SHEET AND RILL EROSION AND WIND EROSION ON NONFEDERAL CROPLAND—Continued

(By State and year)

State/year	Sheet and rill erosion			Wind erosion			Combined erosion		
	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total
1992	3.7	.4	3.0	5.2	.8	4.3	8.9	1.2	7.3
Illinois:									
1982	6.4	2.8	6.3	.....	.....	.....	6.4	2.8	6.3
1987	5.3	2.9	5.2	.....	.....	.....	5.3	2.9	5.2
1992	4.4	2.1	4.3	.....	.....	.....	4.4	2.1	4.3
Indiana:									
1982	4.8	1.6	4.7	.5	.1	.5	5.3	1.7	5.2
1987	4.4	1.6	4.2	.5	.1	.5	4.9	1.7	4.7
1992	3.4	1.5	3.3	.4	.....	.4	3.8	1.5	3.7
Iowa:									
1982	7.8	3.2	7.5	3.1	.5	2.9	10.9	3.7	10.4
1987	6.5	4.0	6.3	2.4	.4	2.3	8.9	4.4	8.6
1992	5.6	2.0	5.4	1.4	.1	1.3	7.0	2.1	6.7
Kansas:									
1982	2.6	.4	2.5	2.6	.3	2.5	5.2	.7	5.0
1987	2.6	.6	2.5	3.1	.4	2.9	5.7	1.0	5.4
1992	2.3	.4	2.2	2.1	.7	2.1	4.4	1.1	4.3
Kentucky:									
1982	10.6	1.3	8.4	.....	.....	.....	10.6	1.3	8.4
1987	11.3	1.5	8.4	.....	.....	.....	11.3	1.5	8.4
1992	7.3	1.4	5.3	.....	.....	.....	7.3	1.4	5.3
Louisiana:									
1982	4.8	.8	4.7	.....	.....	.....	4.8	.8	4.7
1987	4.2	.5	4.0	.....	.....	.....	4.2	.5	4.0
1992	3.6	.7	3.5	.....	.....	.....	3.6	.7	3.5
Maine:									
1982	4.3	.2	1.9	.....	.....	.....	4.3	.2	1.9
1987	4.4	.3	2.0	.....	.....	.....	4.4	.3	2.0
1992	3.1	.3	1.3	.....	.....	.....	3.1	.3	1.3
Maryland:									
1982	5.6	1.7	5.1	.1	.....	.1	5.7	1.7	5.2
1987	5.2	2.8	4.9	.1	.....	.1	5.3	2.8	5.0
1992	4.9	2.1	4.5	.1	.....	.1	5.0	2.1	4.6
Massachusetts:									
1982	5.4	.2	1.6	.....	.....	.....	5.4	.2	1.6
1987	5.7	.1	1.6	.....	.....	.....	5.7	.1	1.6
1992	4.2	.2	1.3	.....	.....	.....	4.2	.2	1.3
Michigan:									
1982	2.6	.6	2.2	2.6	.4	2.1	5.2	1.0	4.3
1987	2.6	.8	2.2	2.9	.4	2.3	5.5	1.2	4.5
1992	2.3	.6	1.9	2.6	.4	2.1	4.9	1.0	4.0
Minnesota:									
1982	2.6	1.1	2.4	5.9	.5	5.2	8.5	1.6	7.6
1987	2.6	1.0	2.5	6.6	1.2	6.0	9.2	2.2	8.5
1992	2.4	.7	2.2	6.3	.7	5.7	8.7	1.4	7.9
Mississippi:									
1982	7.7	2.8	7.6	.....	.....	.....	7.7	2.8	7.6
1987	6.7	2.1	6.6	.....	.....	.....	6.7	2.1	6.6
1992	5.7	1.5	5.5	.....	.....	.....	5.7	1.5	5.5
Missouri:									
1982	10.9	1.4	9.6	.....	.....	.....	10.9	1.4	9.6
1987	8.5	1.3	7.5	.....	.....	.....	8.5	1.3	7.5
1992	6.7	1.0	5.5	.....	.....	.....	6.7	1.0	5.5
Montana:									
1982	2.1	.2	1.8	8.0	.5	6.8	10.1	.7	8.6
1987	2.4	.2	2.0	8.8	.6	7.5	11.2	.8	9.5
1992	2.0	.2	1.6	7.3	.4	6.0	9.3	.6	7.6
Nebraska:									
1982	4.9	1.4	4.5	1.6	.2	1.5	6.5	1.6	6.0

ESTIMATED AVERAGE ANNUAL SHEET AND RILL EROSION AND WIND EROSION ON NONFEDERAL CROPLAND—Continued

(By State and year)

State/year	Sheet and rill erosion			Wind erosion			Combined erosion		
	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total
1987	4.3	.8	4.0	1.8	.4	1.6	6.1	1.2	5.6
1992	3.6	.6	3.3	1.7	.4	1.6	5.3	1.0	4.9
Nevada:									
1982 .....	.3	.....	.1	34.1	2.9	12.1	34.4	2.9	12.2
1987 .....	.3	.....	.1	63.5	2.1	11.7	63.8	2.1	11.8
1992 .....	.2	.....	.1	50.2	2.0	12.8	50.4	2.0	12.9
New Hampshire:									
1982	4.6	.4	1.4	.....	.....	.....	4.6	.4	1.4
1987	5.0	.4	1.4	.....	.....	.....	5.0	.4	1.4
1992	3.6	.4	.8	.....	.....	.....	3.6	.4	.8
New Jersey:									
1982	7.1	1.2	5.8	.1	.....	.....	7.2	1.2	5.8
1987	7.2	2.1	6.0	.1	.....	.....	7.3	2.1	6.0
1992	5.8	1.2	4.5	.1	.....	.1	5.9	1.2	4.6
New Mexico:									
1982	1.3	.1	1.1	14.9	4.0	13.0	16.2	4.1	14.1
1987 .....	.9	.1	.7	16.2	3.6	13.2	17.1	3.7	13.9
1992	1.0	.1	.8	17.0	2.9	13.5	18.0	3.0	14.3
New York:									
1982	4.3	1.1	2.7	.....	.....	.....	4.3	1.1	2.7
1987	4.5	1.4	2.7	.....	.....	.....	4.5	1.4	2.7
1992	4.4	1.2	2.5	.....	.....	.....	4.4	1.2	2.5
North Carolina:									
1982	6.5	1.5	6.2	.....	.....	.....	6.5	1.5	6.2
1987	6.3	1.6	6.0	.....	.....	.....	6.3	1.6	6.0
1992	5.6	1.4	5.3	.....	.....	.....	5.6	1.4	5.3
North Dakota:									
1982	1.9	.5	1.8	6.4	.6	5.9	8.3	1.1	7.7
1987	2.0	.6	1.8	6.5	.8	6.0	8.5	1.4	7.8
1992	1.5	.4	1.4	2.1	.3	1.9	3.6	.7	3.3
Ohio:									
1982	3.9	1.6	3.7	.3	.....	.3	4.2	1.6	4.0
1987	3.7	1.9	3.5	.3	.....	.2	4.0	1.9	3.7
1992	3.3	1.9	3.1	.1	.....	.1	3.4	1.9	3.2
Oklahoma:									
1982	2.7	.7	2.6	2.4	.6	2.3	5.1	1.3	4.9
1987	3.0	.5	2.9	2.6	.6	2.5	5.6	1.1	5.4
1992	3.0	.6	2.8	1.8	.3	1.8	4.8	.9	4.6
Oregon:									
1982	5.5	.7	4.4	2.2	.3	1.8	7.7	1.0	6.2
1987	3.9	.5	2.9	2.5	.4	1.9	6.4	.9	4.8
1992	3.9	.4	2.9	1.7	.2	1.2	5.6	.6	4.1
Pennsylvania:									
1982	7.5	1.4	4.9	.....	.....	.....	7.5	1.4	4.9
1987	7.7	2.4	5.1	.....	.....	.....	7.7	2.4	5.1
1992	6.4	2.0	4.3	.....	.....	.....	6.4	2.0	4.3
Rhode Island:									
1982	6.2	1.0	2.7	.....	.....	.....	6.2	1.0	2.7
1987	6.1	1.9	2.8	.....	.....	.....	6.1	1.9	2.8
1992	5.8	1.4	2.5	.....	.....	.....	5.8	1.4	2.5
South Carolina:									
1982	4.0	1.8	3.9	.....	.....	.....	4.0	1.8	3.9
1987	4.0	1.4	3.8	.....	.....	.....	4.0	1.4	3.8
1992	3.3	1.0	3.2	.....	.....	.....	3.3	1.0	3.2
South Dakota:									
1982	2.9	.5	2.5	4.1	.5	3.6	7.0	1.0	6.1
1987	2.6	.4	2.3	3.7	.8	3.3	6.3	1.2	5.6
1992	2.3	.4	2.0	2.7	.4	2.3	5.0	.8	4.3
Tennessee:									
1982	11.0	1.1	9.4	.....	.....	.....	11.0	1.1	9.4

ESTIMATED AVERAGE ANNUAL SHEET AND RILL EROSION AND WIND EROSION ON NONFEDERAL CROPLAND—Continued

(By State and year)

State/year	Sheet and rill erosion			Wind erosion			Combined erosion		
	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total	Cultivated	Noncultivated	Total
1987	11.0	1.2	9.1	.....	.....	.....	11.0	1.2	9.1
1992	9.3	1.0	7.1	.....	.....	.....	9.3	1.0	7.1
Texas:									
1982	2.6	1.0	2.5	12.6	2.7	12.4	15.2	3.7	14.9
1987	2.5	1.1	2.5	11.5	3.0	11.3	14.0	4.1	13.8
1992	2.6	.8	2.5	9.2	1.9	9.0	11.8	2.7	11.5
Utah:									
1982	1.7	.2	1.0	6.6	1.9	4.5	8.3	2.1	5.5
1987	2.2	.1	1.0	7.0	2.1	4.2	9.2	2.2	5.2
1992	1.7	.2	.9	7.0	1.7	4.1	8.7	1.9	5.0
Vermont:									
1982	4.6	.5	1.3	.....	.....	.....	4.6	.5	1.3
1987	4.3	.8	1.4	.....	.....	.....	4.3	.8	1.4
1992	4.2	.7	1.3	.....	.....	.....	4.2	.7	1.3
Virginia:									
1982	7.2	1.5	5.5	.2	.....	.1	7.4	1.5	5.6
1987	6.9	1.8	5.1	.2	.....	.2	7.1	1.8	5.3
1992	6.6	1.6	4.6	.2	.....	.1	6.8	1.6	4.7
Washington:									
1982	6.1	.5	5.4	3.7	1.5	3.4	9.8	2.0	8.8
1987	7.1	.4	6.2	3.8	1.3	3.5	10.9	1.7	9.7
1992	5.1	.5	4.3	5.3	2.3	4.8	10.4	2.8	9.1
West Virginia:									
1982	7.7	.8	2.5	.....	.....	.....	7.7	.8	2.5
1987	10.1	.9	2.9	.....	.....	.....	10.1	.9	2.9
1992	5.2	.9	1.8	.....	.....	.....	5.2	.9	1.8
Wisconsin:									
1982	5.2	2.3	4.2	.2	.....	.1	5.4	2.3	4.3
1987	4.6	2.7	3.8	.3	.....	.2	4.9	2.7	4.0
1992	4.1	1.6	3.2	.3	.....	.2	4.4	1.6	3.4
Wyoming:									
1982	1.7	.2	1.0	16.4	1.9	9.3	18.1	2.1	10.3
1987	1.6	.2	.8	16.7	2.0	8.9	18.3	2.2	9.7
1992	1.5	.2	.7	21.3	1.3	9.4	22.8	1.5	10.1
Caribbean:									
1982	11.0	13.4	11.3	.....	.....	.....	11.0	13.4	11.3
1987	10.8	14.7	11.4	.....	.....	.....	10.8	14.7	11.4
1992	12.8	15.7	13.5	.....	.....	.....	12.8	15.7	13.5
Total:									
1982	4.5	1.1	4.1	3.7	.5	3.3	8.2	1.6	7.4
1987	4.1	1.2	3.7	3.7	.5	3.2	7.8	1.7	6.9
1992	3.5	.9	3.1	2.9	.4	2.5	6.4	1.3	5.6

REDUCING SOIL LOSS

Senator BUMPERS. Let me ask you this question: Of the roughly 450 million acres of farmland in this country, is that figure going down every year?

Mr. JOHNSON. I think our NRI from 1992 showed it down—Tom, do you have a figure on that?

Mr. WEBER. I think it is roughly 10 million acres.

Mr. JOHNSON. 9 or 10 million acres.

Senator BUMPERS. A year?

Mr. JOHNSON. That was for 5 years, I believe.

Senator BUMPERS. 9 or 10 million. So we are talking about 2 million acres a year? Where does it end? How long can we sustain the kinds of production we have right now and 50 billion dollars' worth of exports, and that happening?

Mr. JOHNSON. That is a challenge that we have. Fortunately, the farm bill that you just helped craft did put some farmland protection on.

Senator BUMPERS. I did not help craft all of it.

Mr. JOHNSON. I am sorry, but in the conservation provisions there is for the first time a recognition that the Federal Government will help to contribute to stop the loss of prime farmland, and they will work together with State and local governments to do that.

FARMLAND PROTECTION PROGRAM

Senator BUMPERS. Just one final question, Mr. Chairman.

In going over my notes on this, I see that we have a new program requested here, called the Farmland Protection Program, and \$35 million Farmland Protection Program, to purchase not less than 170,000 nor more than 340,000 acres of prime and unique farmland. What is the idea of that?

Mr. JOHNSON. That is to help purchase conservation easements, or work together with State and local governments where they have programs.

Senator BUMPERS. So, they have to propose this plot that you are going to use—the local governments have to propose it to you, is that correct?

Mr. JOHNSON. Well, we are going to work together with State and local governments. Many State and local governments have farmland protection programs already in place, and so this will help match their funds to be able to protect this land.

WATER QUALITY STUDIES

Senator BUMPERS. Mr. Johnson, I can tell you there is a project in my State, it is a very expensive one. I have tried to get this thing authorized for about 3 years now, and it is so expensive, and I can understand Senator Warner and Senator Chafee's normal antipathy to a project that is that big, but the other day we were dedicating the new germplasm center for rice research at Stuttgart, AR.

We raise 43 percent of all the rice produced in this country, and I will never forgive the Agriculture Department for trying to put that thing in Idaho, where there is not a grain of rice, but we finally got it placed in Stuttgart, AR. It is going to be a magnificent facility, but what we have in eastern Arkansas are a series of aquifers, and as you know, you have to have a lot of top storage to raise rice.

Now, Senator Cochran's well aware of this, because Mississippi is a substantial rice producer, too, and perhaps he does not have the water problems we have, but when I think about—I do not know, my guess is we are probably exporting 50 percent of all the rice we grow. It is a substantial contributor to the reduction of our trade balance and farm exports.

But I can tell you there is not anything that any farmer in Arkansas wants more than this so-called Grand Prairie water study, which is probably going to be a 10- to 20-year study at a cost of about \$330 million in today's dollars, so as I say, I understand the normal reaction Senators Warner and Chafee have about that.

But I can tell you, as I drove from Little Rock to Stuttgart through rice fields that were being prepared, literally in my State I guess 1½ million, close, or more acres this year—there will not be any rice raised in Arkansas 20, 25 years from now, unless we do that water study and figure out how we are going to keep those aquifers from being depleted.

In some places they are going down as much as 4 and 5 feet a year, and unless we deal with that on a basis of all those aquifers down there, as I say, we are going to have an unmitigated disaster. Where are you going to pick up 43 percent of all the rice in this country if we are put out of the rice business? And that is what is at stake here.

So even though the cost is great, it is estimated that it would only cost about \$25 to \$30 million a year to do it, and it is a massive undertaking. A lot of thought has been given to it. Like everything else around here it takes forever to get anything like that done.

I just wanted to make you aware of it, all of you aware of it so you will know how critical it is, and to make the chairman aware of it also.

Thank you, Mr. Chairman.

WETLANDS DETERMINATIONS

Senator COCHRAN. Thank you, Senator.

Mr. Johnson, you mentioned in your statement that except when requested by landowners, the NRCS ceased making wetlands determinations on private lands in April 1995, in anticipation of the writing of the farm bill. Now, with the farm bill signed, you say that determinations and delineations will increase. Will NRCS continue its policy of only making determinations on private lands if requested by the landowner?

Mr. JOHNSON. That is being discussed right now as we try to take a look at swampbuster and how we are going to carry out the new farm bill, and Tom Weber has that in his shop and he can probably bring you up to date on exactly where we are right now.

Mr. WEBER. Yes, Mr. Chairman; we have a team that we are going to be putting together to look at that whole issue of wetlands, the swampbuster issues, the determination issue, and the certification issue. It is all part of what we need to look at as a package, and to decide as a department what is in the best interest of carrying out the statute and when we would implement once again the determinations—we do make determinations upon request of the landowner, new determinations right now.

BUDGET IMPLICATIONS OF DETERMINATIONS

Senator COCHRAN. What are the budget implications? Do you have any projections of how much this is all going to cost, and is there a provision in your budget request that reflects this estimate?

Mr. WEBER. That is part of this evaluation we are going through now on the whole farm bill to see what the budget implications are. We are working with the Department on that.

ALTERNATIVE WATER SUPPLIES IN THE YAZOO BASIN

Senator COCHRAN. There is a study which may be similar to the one Senator Bumpers was talking about getting authorized which the service initiated a couple of years ago to determine the economic and environmental feasibility of using alternative water supplies for agriculture irrigation in the Yazoo Basin in Mississippi.

My question is, What funding level is assumed for that study in this next fiscal year, and does your budget include a specific request for funds to continue this study?

Mr. JOHNSON. Tom, Bob, Pearlie. We may have to get you the numbers.

Senator COCHRAN. I would like a status report on what has been done to date and the progress that has been made on this study, and a timetable for the completion of the study. It suits me fine for you to submit that for the record.

Mr. JOHNSON. Very good, Mr. Chairman, I will do that.

[The information follows:]

YAZOO BASIN, MS

The Yazoo demonstration erosion control project was started in 1985 as a joint effort between NRCS, ARS, and the Corps of Engineers (COE). The Flood Control Act of 1944 (Public Law 534) grants NRCS authority, however, the rate at which these projects are installed is contingent upon both USDA and DOD appropriations.

Erosion control projects are identified through fiscal year 2000. Projects include land treatment measures and structures. As of fiscal year 1996, the COE has almost completed eight projects and NRCS six. There is uncertainty, however, about continued funding levels by the COE. NRCS proposes four projects in fiscal year 1997 requiring about \$5.0 million, five in fiscal year 1998 for \$3.6 million, five in fiscal year 1999 for \$3.2 million, and six projects in fiscal year 2000 requiring \$2.3 million.

HIGH-PRIORITY WATERSHEDS

Senator COCHRAN. In the budget proposal there is \$19.2 million requested for watershed surveys and planning. That is an increase of \$5.2 million from last year's level. The budget also proposes a staff level which reflects an increase of 57 staff-years above the 1996 level.

This program was established to survey small watershed projects under 250,000 acres and prepare plans to improve those watersheds. The request includes a \$5 million increase for high-priority national environmental concerns. I am interested in knowing what that is and how a small watershed project under 250,000 acres could have a high-priority national environmental concern attached to it.

Who is going to decide which ones have these high-priority characteristics, and what are the elements of or standard for making that kind of decision?

Mr. JOHNSON. That is a good question for Tom Weber.

Mr. WEBER. Yes, Mr. Chairman; as you are probably aware, the level of funding for the watershed planning process has dropped. Last year it dropped, I believe, almost 40 percent.

I have got the figure here. This would allow the continuation of 91 projects that are currently ongoing, the completion of seven

plans for those projects, and it would allow us to establish 10 new watershed planning starts, and we have ongoing applications for a greater number than 10.

We would go through an evaluation priority-setting process to identify which have the highest priority of those that this funding would be used for, so completing existing studies, and probably 10, at least 10 new studies would come out of this process.

HIGH-PRIORITY DETERMINATIONS

Senator COCHRAN. What are the standards for deciding what is a national high priority environmental concern?

Mr. WEBER. We have a team, actually, that is going to be putting together a proposal on what those criteria should be.

Senator COCHRAN. It would be nice to have a copy of that when the team decides. Would you submit that to the committee for our information?

Mr. WEBER. Yes.

CONSERVATION RESERVE PROGRAM

Senator COCHRAN. The Conservation Reserve Program has been a very popular program, everyone agrees, and the farm bill continues the authority for that program.

I notice that in the budget submitted, there is a good deal of emphasis on showing a correlation between this program and the duck population. I do not know whether you all have looked at that, or whether you had anything to do with drawing that up, but I imagine there are others in the administration that would take issue with the correlation that is claimed. Is that an accurate measure of the success of the program, do you think?

Mr. LYONS. Well, Mr. Chairman, I would suggest that there are a lot of measures of the success of the program. We attribute a great deal of the improvement in reducing soil loss over the last 10 years to CRP. CRP has helped restore thousands of acres of wetlands which, of course, have had a big impact on waterfowl populations and the like.

As you know from the interest in the 1995 farm bill, one of the strongest advocates for continuation of CRP was Pheasants Forever, recognizing the significant increase in pheasant populations throughout the Midwest as a result of CRP.

There are a lot of ways to measure, as I said, the success of that program. I think that clearly is one of them.

We see it as a program that serves multiple benefits. It, you know, also has served a significant role in reducing commodity surpluses, and of course, now we are in a totally different situation given commodity prices.

We see it as a tremendous conservation tool in combination with other easement retirement, land retirement programs like WRP to be tied to the other tools we have, technical assistance, cost-share assistance and the like, so we think that is a good measure of performance, and maybe one that people do not think about very much, but it certainly has an economic tie as well, since sport hunting is a tremendous source of revenue for some communities and some landowners who take advantage of that and lease out their lands.

FORESTRY INCENTIVES PROGRAM

Senator COCHRAN. In the Forestry Incentives Program, there is a suggestion that statutory language ought to be adopted by Congress to the effect that funds shall be targeted to lands that provide the higher overall environmental benefits. I do not know what response Congress is going to make to that suggestion, but I do not think the farm bill contains that language.

My question was whether or not this program is not already administered in a way to try to target the funds to lands that provide environmental benefits from tree planting.

Mr. LYONS. I think that reflects—I will not take responsibility for having drafted that language, but I would suggest that there is a tremendous demand for FIP funds, and clearly the demand outstrips the resources available, and we simply ask for funding at last year's level for FIP. The program is reauthorized in the farm bill this year.

There are other benefits that accrue to reforestation, other than obviously putting trees back in the ground, and that is identifying sites where we might improve water quality, might address wildlife habitat concerns and the like, and I think the goal there is to try to get the maximum benefit we can from the limited resources we have in FIP.

I would say that work would have to be done to define the specific environmental benefits, but water quality, improved wildlife habitat, reducing soil loss, et cetera, might be some of the criteria we would use in setting priorities.

Senator COCHRAN. Are you going to make those decisions here in Washington, or are you going to let the locals make them?

Mr. LYONS. Well, as you know, FIP is really administered in close coordination with State foresters, and State forestry organizations, and I would think that they are in a better position to help set some of those priorities based on their knowledge of the landscape.

RESOURCE CONSERVATION AND DEVELOPMENT

Senator COCHRAN. That is good. The last question I have is in connection with the request for the Resource Conservation and Development Program. It is a very small amount in the budget, less than a \$500,000 increase is requested, but a reduction in full-time equivalent positions is proposed. The budget request indicates that there are 58 applications that were pending in fiscal year 1996, and that no new resource conservation and development areas will be approved in fiscal year 1997.

I would like for you to submit to the committee for our information a list of these pending applications, and an estimate of the funds needed to enroll all of them.

Mr. LYONS. We will be glad to do so.

[The information follows:]

RC&D APPLICATIONS FOR NEW AUTHORIZATIONS

Currently there are 51 RC&D applications for authorization as official RC&D's by the Secretary of Agriculture. NRCS estimates that at least seven more areas will apply for authorization before the end of fiscal year 1996 bringing the total appli-

cant areas to 58. The amount needed to enroll the current 51 applications on file is \$9 million.

<i>State</i>	<i>Application area</i>
Alaska	Copper Valley Lower Kuskokwim Lower Yukon
Georgia	Rolling Hills
Idaho	Mid Snake
Illinois	Post Oak Flats Wabash Valley
Indiana	Wood-Land-Lakes
Iowa	Iowa Lakes
Kansas	Western Prairie
Kentucky	Eagle Gateway Jackson Purchase Thoroughbred
Louisiana	Acadiana
Minnesota	Laurentian Three Rivers
Missouri	Mark Twain Northeast Missouri Platte Territory
Montana	North Central Montana
Nebraska	Five Rivers Loess Hills South Central Nebraska Trailblazer
New Hampshire	Southern New Hampshire
North Carolina	Pilot View
New York	Hudson-Mohawk Ontario Lake Plains
Ohio	Heart of Ohio Western Reserve
Oklahoma	High Plains
Oregon	WyEast
Pennsylvania	Southeast Pennsylvania Capital
Puerto Rico	Oriente
Tennessee	Buffalo Duck River
Texas	Bluebonnet Chisolm Trail Chihuahuan Desert Concho Valley Hill Country High Plains Pecos Valley Rio Grand Nueces Sabine Neches
Utah	Mountainland Wasatch Front
Washington	Big Bend
Wisconsin	Southwest Badger
Wyoming	Historic Trails

WIND EROSION

Senator COCHRAN. Senator, do you have any other questions?

Senator BUMPERS. I just had one or two questions. The CRP enrollments have always considered eligibility based on soil type and slope. The farm bill authorizes a pilot program to also include wind erosion. Do you have an inventory of how much land might qualify that would not otherwise qualify because of wind erosion?

Mr. LYONS. I do not believe we have that right offhand. We would have to generate that, Senator Bumpers.

Mr. WEBER. We will send that back up.

Senator BUMPERS. My staff says wind, moisture, and temperature are currently given limited consideration when determining eligibility. I think it is fine to include wind erosion. Wind erosion is erosion just like any other form of erosion, and I am very pleased to see it added, but this is a pilot program, is it not?

WILDLIFE HABITAT

Mr. JOHNSON. Yes; in the enrollment of CRP we also include wildlife habitat and the potential for that and water quality issues as well.

Senator BUMPERS. Is that something you have not done before, wildlife habitat?

Mr. JOHNSON. I believe we started that in the 13th signup, is that right, so—and water quality as well.

RURAL ABANDONED MINE PROGRAM

Senator BUMPERS. And finally the RAMP Program. What on earth has happened to the RAMP Program? There is still a lot of coal mining dumps in my home county. They have done a magnificent job of leveling a lot of them, and a lot of them are in livestock production right now.

I think I can remember when I was Governor somebody told me it takes 100 years to build 1 inch of topsoil. I do not much doubt that, but this land, the farmers are good stewards. They are feeding their cattle in the wintertime in those areas that have been leveled, but what has happened to the Rural Abandoned Mine Program?

Mr. JOHNSON. This is in the Department of the Interior, and the money comes out of a trust fund. I talked with people in the Office of Surface Mining just the other day, and it is not being released for RAMP right now.

Senator BUMPERS. How much money is in the trust fund, do you know?

Mr. JOHNSON. I believe it is close to \$1 billion.

Senator BUMPERS. \$1 billion?

Mr. JOHNSON. Yes.

Senator BUMPERS. And they are not releasing any of it for this?

Mr. JOHNSON. Some of it is going out to State programs, but RAMP, as you know, is an effort that we have worked on through the Department of the Interior, and they are not releasing that, or that was not allocated in last year's appropriations.

Senator BUMPERS. Well, I am going to look into that.

Mr. JOHNSON. There is terrific work going on out there, as you know, in RAMP, and I have been on some of the sites, and it is pretty exciting, and I think that we have real possibilities to continue a RAMP kind of a program, not just for health and safety, but for wildlife habitat, for water quality, and all these issues as well, and there is a crying need out there for it.

Senator BUMPERS. Yes; let me say, Mr. Johnson, as strong an advocate as I am for the RAMP Program, I also must admit it has been incredibly expensive on a per-acre basis. I frankly do not un-

derstand why it has to be that expensive. The \$6,000 an acre is not unusual for some of the contracts that have been let in my State.

GRAND PRAIRIE WATER STUDY

Let me just make one other clarifying remark. When I was talking about the Grand Prairie water study, I know this is not primarily your project. I wanted to make everybody in the Department of Agriculture aware of the effect that is going to have on rice particularly, because we use so much water to raise rice. It also affects soybeans, which we irrigate to a great extent, and cotton.

But the Corps of Engineers, as you know, is an organization that would have most responsibility for the study. Assistant Secretary of the Army, Mrs. Dorn is not there any more.

She felt that the Corps of Engineers should not involve themselves in anything, for example, that had anything to do with agriculture. Is that right? I talked to the current Secretary the other day. He is not nearly as reluctant as she was about this kind of thing, but I wanted you all to be aware of it because of the agricultural implications, but the Corps is the primary agency to do the study. I wanted to clarify the record on that.

Mr. JOHNSON. I believe, Senator, you know that we have within the last year established a water center in Arkansas to help deal with this issue as well.

Senator BUMPERS. Yes, I know.

Mr. JOHNSON. Also, in regard to your remarks with the Corps, we are working with the Corps now in a very innovative project up in Toledo, OH, where they have been spending something like \$3 million a year to dredge the harbor, and we have convinced them that they should put some of that money toward land treatment so that we do not get the silt in the harbor, and \$700,000 this year is going toward that, and we are looking at that as one way to deal with prevention rather than having to deal with the consequences later on.

CLOSING REMARKS

Senator BUMPERS. A final profound statement, Mr. Chairman. This committee room is almost empty today, and it just shows how inattentive we are to long-range problems that assure absolutely catastrophic destiny for this country.

When you talk about the acreage that we have that is now under cultivation, 140 million of it erodible lands, losing 2 million acres a year, and while people like Norm Borlog and George Washington Carver and even Henry Wallace have been able to assure us of a food supply because of improved strains of various commodities such as rice and corn—I can remember when I was a kid, 50 bushels of corn was a big crop; 50, 60 bushels of rice was a big crop 40 or 50 years ago, and now 200 bushels an acre on both corn and rice is not uncommon, and while we may improve on that, everything has its limits.

When I went into the Marine Corps in World War II this country was 130 million people. Today, we are 260 million. The population of the world then was a little under 2 billion, and today we are running at 5.5 billion.

This kind of thing we are talking about this morning, good stewards of the land, conserving our land, using it in the most productive but sensible way, is essential to even my grandchildren's survival, and you know, I think that Asia and Africa are both, and South America, are going to be dying continents, because they cannot continue the population growths they are experiencing and even come close to feeding their people.

Well, I could go on and on about this, but I am just simply saying that the area that you people are operating in is just about the most important area in the whole country. I am a great conservationist because I believe, you know, as the English philosopher said, nothing is more utterly impossible than undoing something you have already done. We have to do it right the first time so we do not have to undo it.

Those are my sentiments, Mr. Chairman.

SUBMITTED QUESTIONS

Senator COCHRAN. Thank you, Senator. There will be additional questions which will be submitted in writing, and we urge you to respond to them within a reasonable period of time.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

WATERSHED AND FLOOD PREVENTION OPERATIONS

The FY 96 appropriation for Watershed and Flood Prevention Operations was \$100 million. There has been some criticism that although there was an increase for this account, less money was provided for construction, and a larger proportion was committed for salaries for technical assistance.

Question. How much of this amount was allocated for construction, and how much for technical assistance? Please provide for the record a listing by state of the construction and technical assistance allocations for the past four fiscal years.

Answer. The FY 1996 appropriation for Watershed and Flood Prevention Operations was \$85 million for PL-566 projects and \$15 million for PL-534 projects. 60 percent or about \$60 million, was for technical assistance and \$36 million went to sponsors for the federal share of construction contracts and long-term contracts with individuals.

The technical assistance component addresses all NRCS National Office, Department, and Regional Office needs as well as national level agreements. About \$50 million of the \$60 million in technical assistance funds went directly to states to support NRCS engineers, designers, drafters, contract specialists, and construction inspectors who serve as the sponsors technical arm for project installation. Technical assistance funds also address Agriculture and Engineering (A&E) contracts with private firms for services not available within NRCS. Technical assistance is provided to several projects in which the financial assistance is totally funded from other sources.

The financial assistance component is direct payments to sponsors or contractors for the federal share of construction and the federal share in long-term contracts with individuals within watershed protection projects.

The attached tables for the record show the last 4 years technical and financial allocations to each state.

FY 1993 OBLIGATIONS

ST	TA for PL-534	TA for PL-566	TOTAL TA	FA for PL-534	FA for PL-566	TOTAL FA
AL		875,825	875,825		1,847,946	1,847,946
AK			0			0
AZ		1,240,000	1,240,000		1,005,510	1,005,510
AR		1,608,379	1,608,379		2,683,599	2,683,599
CA	199,845	2,062,353	2,262,198		4,724,385	4,724,385
CO		591,599	591,599		2,377,694	2,377,694
CT		524,700	524,700		501,218	501,218
DE		427,908	427,908		232,106	232,106
FL		391,140	391,140		438,860	438,860
GA		1,259,041	1,259,041		2,279,670	2,279,670
HI		851,750	851,750		3,918,280	3,918,280
ID		552,985	552,985		-81,675	-81,675
IL		1,095,754	1,095,754		1,757,402	1,757,402
IN		562,961	562,961		11,789	11,789
IA	1,281,000	1,503,124	2,784,124	1,726,000	4,099,957	5,825,957
KS		2,088,971	2,088,971		4,353,720	4,353,720
KY		1,298,772	1,298,772		497,228	497,228
LA		1,136,016	1,136,016		1,705,446	1,705,446
ME		569,967	569,967		169,010	169,010
MD		330,000	330,000		374,269	374,269
MA		574,800	574,800		400,000	400,000
MI		704,689	704,689		652,674	652,674
MN		1,225,000	1,225,000		854,409	854,409

MS	5,309,000	2,073,998	7,382,998	4,344,000	4,557,648	8,901,648
MO		2,487,000	2,487,000		5,715,401	5,715,401
MT		794,500	794,500		361,631	361,631
NE		1,045,999	1,045,999		1,785,367	1,785,367
NV		114,964	114,964		0	0
NH		317,299	317,299		72,450	72,450
NJ		655,172	655,172		-4,889	-4,889
NM		1,371,000	1,371,000		11,194,710	11,194,710
NY	62,000	658,043	720,043		53,767	53,767
NC		1,370,000	1,370,000		2,005,589	2,005,589
ND		393,000	393,000		118,097	118,097
OH		1,250,000	1,250,000		2,358,473	2,358,473
OK	1,398,000	2,970,799	4,368,799	1,456,000	2,399,761	3,855,761
OR		642,914	642,914		862,839	862,839
PB		171,005	171,005		375,000	375,000
PA		1,382,113	1,382,113		-118,606	-118,606
PR		599,295	599,295		19,358	19,358
RI		105,000	105,000		0	0
SC		610,000	610,000		291,648	291,648
SD		115,979	115,979		0	0
TN		1,686,010	1,686,010		1,542,512	1,542,512
TX	2,400,000	3,422,429	5,822,429	10,146,000	6,465,570	16,611,570
UT		691,300	691,300		46,497	46,497
VT		609,898	609,898		309,631	309,631
VA	526,000	1,511,991	2,037,991	40,000	1,115,668	1,155,668
WA		1,264,822	1,264,822		37,638	37,638
WV	2,687,000	2,914,903	5,601,903	6,421,000	10,705,784	17,126,784
WI		683,100	683,100		3,290,001	3,290,001
WY		300,000	300,000		435,795	435,795
TOT	13,862,845	53,688,267	67,551,112	24,133,000	90,800,837	14,933,837

NOTES: TA is technical assistance for project design and installation and includes salaries for engineers, draftpersons, contract specialists, construction inspectors, and A&E contracts.

FA is financial assistance to sponsors for the Federal share of construction and long-term contracts.

FY 1994 OBLIGATIONS

ST	TA for PL-534	TA for PL-566	TOTAL TA	FA for PL-534	FA for PL-566	TOTAL FA
AL		911,533	911,533		1,465,225	1,465,225
AK		0	0		0	0
AZ		1,278,500	1,278,500		1,849,619	1,849,619
AR		1,646,610	1,646,610		748,315	748,315
CA	400,000	2,745,598	3,145,598		5,551,700	5,551,700
CO		665,000	665,000		233,593	233,593
CT		547,700	547,700		75,667	75,667
DE		445,947	445,947		205,379	205,379
FL		541,599	541,599		775,303	775,303
GA	4,000	899,871	903,871		3,433,775	3,433,775
HI		1,157,000	1,157,000		1,027,227	1,027,227
ID		1,019,762	1,019,762		111,548	111,548
IL		1,198,627	1,198,627		1,382,736	1,382,736
IN		708,585	708,585		1,365,435	1,365,435
IA	1,281,000	1,571,827	2,852,827		3,513,165	3,513,165
KS		2,175,973	2,175,973		5,406,555	5,406,555
KY		802,810	802,810		1,414,852	1,414,852
LA		1,137,942	1,137,942		538,982	538,982
ME		558,998	558,998		148,135	148,135
MD		339,301	339,301		-149,551	-149,551
MA		582,000	582,000		400,000	400,000
MI		708,960	708,960		805,796	805,796
MN		1,208,000	1,208,000		2,578,712	2,578,712
MS	5,391,000	2,126,901	7,517,901	8,885,000	3,667,439	12,552,439
MO		2,014,000	2,014,000		3,680,000	3,680,000
MT		728,082	728,082		92,621	92,621
NE		1,011,966	1,011,966		2,152,034	2,152,034
NV		82,854	82,854		0	0
NH		278,295	278,295		0	0
NJ		670,861	670,861		-176	-176
NM		1,428,437	1,428,437		328,122	328,122
NY	60,000	659,219	719,219		1,613,548	1,613,548
NC		1,313,147	1,313,147		2,328,307	2,328,307
ND		422,000	422,000		845,841	845,841

OH		1,347,000	1,347,000		3,630,000	3,630,000
OK	1,698,000	3,027,600	4,725,600	1,670,000	3,744,524	5,414,524
OR		1,096,975	1,096,975		513,391	513,391
PB		279,000	279,000		-107,862	-107,862
PA		1,627,965	1,627,965		4,998,130	4,998,130
PR		611,488	611,488		1,624,095	1,624,095
RI		103,000	103,000		0	0
SC		837,206	837,206		1,237,806	1,237,806
SD		133,272	133,272		0	0
TN		1,556,725	1,556,725		2,869,000	2,869,000
TX	2,675,000	4,306,312	6,981,312	2,396,400	4,370,688	6,767,088
UT		641,000	641,000		464,160	464,160
VT		576,981	576,981		687,818	687,818
VA	570,000	2,073,726	2,643,726	1,300,000	1,592,798	2,892,798
WA		1,975,988	1,975,988		1,196,468	1,196,468
WV	2,070,000	2,708,984	4,778,984	4,850,000	29,442,038	34,292,038
WI		720,000	720,000		4,177,545	4,177,545
WY		442,000	442,000		19,012	19,012
TOT	14,149,000	57,653,127	71,802,127	19,101,400	108,049,515	127,150,915

NOTES: TA is technical assistance for project design and installation and includes salaries for engineers, draftpersons, contract specialists, construction inspectors, and A&E contracts.

FA is financial assistance to sponsors for the Federal share of construction and long-term contracts.

FY 1995 OBLIGATIONS

ST	TA for PL-534	TA for PL-566	TOTAL TA	FA for PL-534	FA for PL-566	TOTAL FA
AL		685,497	685,497		304,321	304,321
AK		0	0		0	0
AZ		1,005,000	1,005,000		508,085	508,085
AR		1,285,991	1,285,991		2,631,995	2,631,995
CA	120,000	2,087,100	2,207,100		759,942	759,942
CO		447,000	447,000		2,186,110	2,186,110
CT		379,140	379,140		-10	-10
DE		349,841	349,841		109,123	109,123
FL		360,000	360,000		310,000	310,000
GA	19,647	845,439	865,086		750,985	750,985
HI		788,650	788,650		83,933	83,933
ID		1,107,810	1,107,810		29,637	29,637
IL		1,072,083	1,072,083		-148,828	-148,828
IN		569,909	569,909		763,003	763,003
IA	699,438	1,265,367	1,964,805	300,561	219,632	520,193
KS		1,734,997	1,734,997		55,915	55,915
KY		597,850	597,850		153,937	153,937
LA		1,022,923	1,022,923		144,728	144,728
ME		520,976	520,976		49,000	49,000
MD		274,860	274,860		35,967	35,967
MA		421,798	421,798		0	0
MI		537,877	537,877		115,855	115,855
MN		697,839	697,839		1,653,335	1,653,335
MS	3,337,889	1,699,880	5,037,769	429,677	673,925	1,103,602
MO		1,439,163	1,439,163		229,137	229,137
MT		550,942	550,942		142,558	142,558
NE		811,707	811,707		152,292	152,292
NV		128,867	128,867		100,000	100,000
NH		256,000	256,000		0	0
NJ		479,060	479,060		0	0
NM		996,695	996,695		233,737	233,737
NY		699,525	699,525		74,775	74,775
NC		1,022,505	1,022,505		637,045	637,045
ND		317,000	317,000		50,833	50,833
OH		1,010,003	1,010,003		734,673	734,673
OK	822,999	2,392,999	3,215,998	596,912	464,342	1,061,254
OR		582,919	582,919		219,268	219,268
PB		245,950	245,950		0	0
PA		1,490,690	1,490,690		1,231,243	1,231,243
PR		541,638	541,638		50,214	50,214
RI		78,562	78,562		0	0
SC		719,100	719,100		30,900	30,900
SD		103,959	103,959		0	0
TN		1,324,941	1,324,941		220,000	220,000
TX	1,449,898	2,660,102	4,110,000	504,961	474,815	979,776

UT		493,000	493,000		134,000	134,000
VT		447,127	447,127		149,842	149,842
VA	309,934	992,983	1,302,917	-38,209	214,038	175,829
WA		1,219,995	1,219,995		332,264	332,264
WV	1,964,994	2,282,944	4,247,938	498,746	405,722	904,468
WI		562,879	562,879		-1,005,361	-1,005,361
WY		270,049	270,049		122,951	122,951
TOT	8,724,799	43,879,131	52,603,930	2,292,648	16,789,878	19,082,526

NOTES: TA is technical assistance for project design and installation and includes salaries for engineers, draftpersons, contract specialists, construction inspectors, and A&E contracts.

FA is financial assistance to sponsors for the Federal share of construction and long-term contracts.

FY 1996 ALLOWANCES

ST	TA for PL-534	TA for PL-566	TOTAL TA	FA for PL-534	FA for PL-566	TOTAL FA
AL		640,000	640,000		607,000	607,000
AK		355,000	355,000		0	0
AZ		955,000	955,000		208,000	208,000
AR		1,204,000	1,204,000		1,052,000	1,052,000
CA	200,000	2,067,800	2,267,800		357,000	357,000
CO		229,900	229,900		244,000	244,000
CT		357,500	357,500		123,000	123,000
DE		234,600	234,600		4,000	4,000
FL		495,000	495,000		692,000	692,000
GA	101,000	700,000	801,000		698,000	698,000
HI		730,000	730,000		202,000	202,000
ID		737,700	737,700		160,000	160,000
IL		850,000	850,000		1,356,000	1,356,000
IN		568,500	568,500		433,000	433,000
IA	1,147,000	1,376,000	2,523,000	1,465,000	1,049,000	2,514,000
KS		1,914,800	1,914,800		922,000	922,000
KY		552,000	552,000		676,000	676,000
LA		830,000	830,000		888,000	888,000
ME		430,200	430,200		218,000	218,000
MD		218,900	218,900		89,000	89,000
MA		278,400	278,400		200,000	200,000
MI		388,000	388,000		408,000	408,000
MN		603,000	603,000		431,000	431,000
MS	2,104,000	1,611,000	3,715,000	2,840,000	711,000	3,551,000
MO		1,838,000	1,838,000		1,664,000	1,664,000
MT		490,700	490,700		554,000	554,000
NE		1,065,400	1,065,400		805,000	805,000
NV		125,000	125,000		4,000	4,000
NH		110,300	110,300		0	0
NJ		379,300	379,300		345,000	345,000
NM		872,000	872,000		67,000	67,000
NY	32,400	550,600	583,000	100,000	850,000	950,000
NC		995,000	995,000		596,000	596,000
ND		433,900	433,900		589,000	589,000
OH		830,600	830,600		885,000	885,000
OK	899,000	2,373,800	3,272,800	732,000	1,419,000	2,151,000
OR		984,000	984,000		138,000	138,000
PB		53,000	53,000		246,000	246,000
PA		1,099,700	1,099,700		702,000	702,000
PR		346,000	346,000		208,000	208,000
RI		45,000	45,000		1,000	1,000
SC		625,000	625,000		325,000	325,000
SD		249,200	249,200		340,000	340,000
TN		1,250,000	1,250,000		699,000	699,000
TX	1,822,000	2,546,200	4,368,200	700,000	2,145,000	2,845,000
UT		413,700	413,700		350,000	350,000
VT		395,500	395,500		268,000	268,000
VA	233,000	1,045,000	1,278,000		564,000	564,000
WA		843,400	843,400		436,000	436,000
WV	1,374,700	2,413,400	3,788,100	1,000,000	2,164,000	3,164,000

WI		347,000	347,000		259,000	259,000
WY		279,000	279,000		472,000	472,000
TOT	7,913,100	41,327,000	49,240,100	6,837,000	28,823,000	35,660,000

NOTES: TA is technical assistance for project design and installation and includes salaries for engineers, draftpersons, contract specialists, construction inspectors, and A&E contracts.
FA is financial assistance to sponsors for the Federal share of construction and long-term contracts.

WATERSHED AND FLOOD PREVENTION OPERATIONS

Question. If structure construction is the only solution to many flood control problems, how is it beneficial to commit increasingly limited funds for technical assistance rather than actual construction?

Answer. Technical assistance is beneficial, and in most cases, essential to the sponsors in the installation of their projects. Technical assistance is for NRCS engineers, designers, drafters, contract specialists, and construction inspectors who serve as the technical arm to the sponsors in the installation of their projects. The technical assistance component has decreased along with the financial assistance component, but there is a critical mass for each state below which no effective implementation can occur.

Increasingly higher percentage of technical assistance is needed to implement watershed projects. This is especially true in PL-566 land treatment projects, as we provide cost share for individual landowners and individuals for installation of conservation practices on farms. We also have several projects that call for only technical assistance from NRCS when the financial assistance is totally funded from other sources.

NRCS is moving toward land treatment and non-structural measures to solve flood control problems. Administration of these projects requires a higher percentage of technical assistance.

Question. Please provide the results of your phase I review of authorized projects and the phase II review to date, including the projects which have been deleted and added.

Answer. The backlog review began in the fall of 1994 and encompassed 404 active projects which included structural measures. The Phase I review determined 87 projects would be completed using FY 1994 funds and 50 projects had no further elements to be built.

The Phase II review looked at the remaining 267 projects in more detail. Teams consisting of sponsoring organizations, state and federal agency representatives, environmental groups, and interested parties reviewed these projects and found 158 to be acceptable as formulated, 75 would be acceptable if modified and 34 where agreement has not been reached by the team as of now.

The following table shows those projects which have been declared completed as a result of the activities by the review team.

BACKLOG PROJECTS COMPLETED TO DATE

<u>Project</u>	<u>Name</u>	<u>Complete</u>
AL2037	BEAR CREEK-SOUTHEAST CHOCTAWHATCHEE RIV .	2/10/95
AL2032	CYPRESS CREEK	12/5/94
AL2034	FACTORY CREEK	2/10/95
AL2028	TALLASEEHATCHIE CREEK	2/10/95
AL2014	TOWN CREEK	2/9/95
AR2045	UPPER TRI-COUNTY	3/16/95
AZ2010	HARQUAHALA VALLEY	11/19/95
CT2009	AVERY BROOK	2/9/95
CT2007	FARM BROOK	1/15/95
FL2017	POND CREEK	8/15/95
GA2033	BEAVERDAM CREEK	3/15/95
GA2055	BIG CREEK	3/15/95
GA2072	DAYS CROSSROADS COMMUNITY	9/1/95
GA2011	HEAD OF LITTLE TENNESSEE RIVER	10/10/95
GA2035	LOWER LITTLE TALLAPOOSA RIVER	8/30/95
GA2023	MIDDLE FORK BROAD RIVER	3/15/95
GA2036	SOUTH FORK OF BROAD RIVER	3/15/95
GA2062	UPPER MULBERRY RIVER	3/15/95
IL2023	UPPER SALT CREEK	10/23/95
IN2033	JORDAN CREEK	9/30/94
IN2016	TWIN-RUSH CREEK	9/30/94
KS2048	BIG CREEK	3/13/95
KS2056	DRY CREEK	3/13/95
LA2032	BAYOU BONNE IDEE	9/30/94
LA2037	BAYOU GROSSE TETE	9/30/94
LA2035	BAYOU PLAQUEMINE BRULE	10/28/94
LA2039	BELL CITY	10/28/94
LA2038	CHOCTAW BAYOU	10/28/94
LA2040	EAST CARROLL	9/30/94
LA2027	WALNUT-ROUNDWAY	7/6/95
MA2007	UPPER QUABOAG RIVER	9/20/95
MN2020	BURNHAM CREEK	3/15/96
MO2018	LOST CREEK	12/13/94
MS2058	BEARTOWN	8/30/94
MS2043	BOX CREEK	8/20/95
MS2008	CHIWAPA CREEK	8/30/94
MS2029	HOLLIDAY CREEK	7/17/95
MS2031	HOULKA CREEK	8/20/95
MS2052	MANTACHIE; BOGUE FALA AND BOGUE EUCUBA C ..	8/20/95
MS2003	MUDDY CREEK	8/30/94
MS2041	RICHLAND CREEK	8/30/94
MS2007	SECOND CREEK	7/17/95
MS2024	STANDING PINE CREEK	7/17/95
MS2045	UPPER LEAF RIVER	7/17/95
MS2060	WHITES CREEK	8/30/94
MS2038	WHITESAND-GREENS CREEKS	8/30/94
MT2020	PASTURE CREEK	4/17/95
NC2035	DUTCHMAN CREEK	4/18/95
NC2036	LITTLE CONTENTNEA CREEK	12/15/94
NC2053	SANDY CREEK	5/1/95
ND2020	ENGLISH COULEE	1/3/95
NE2019	BELLWOOD	4/1/95
NE2046	LONG BRANCH	4/1/95

BACKLOG PROJECTS COMPLETED TO DATE - (continued)

<u>Project</u>	<u>Name</u>	<u>Complete</u>
NE2030	UPPER BIG NEMAHA	4/1/95
NV2006	EAST WALKER	2/14/95
NY2015	CROMLINE CREEK	3/7/95
NY2024	DYKE CREEK	3/7/95
NY2016	HIGINBOTHAM BROOK	3/7/95
NY2003	ISCHUA CREEK	3/31/95
OH2016	PINE CREEK	3/13/95
OK2039	QUAPAW CREEK	8/30/94
SC2026	CANE CREEK	1/4/95
SC2031	ROCKY CREEK	1/4/95
SC2056	WOODROW	4/17/95
SD2015	UNION CREEK	10/10/94
TN2017	PINE CREEK	9/30/94
TX2047	BIG CREEK	10/10/94
TX2005	CUMMINS CREEK	1/3/95
TX2035	LOWER PLUM CREEK	1/1/95
TX2063	MILL CREEK	3/30/95
TX2017	UPPER LAKE FORK CREEK	2/6/95
VA2022	SLATE RIVER	10/31/94
VA2021	UPPER CLINCH VALLEY	9/15/95
VT2004	UPPER CASTLETON RIVER	2/15/96
WA2017	EAST WENATCHEE	3/22/95
WI2026	PINE RIVER	10/23/95
WV2033	TRIBUTARY OF EVITTS RUN	1/10/95
Total Number of projects listed		77

WATERSHED AND FLOOD PREVENTION OPERATIONS

The budget proposes to fund projects authorized under PL-534 under the PL-566 authorization, reserving up to \$15 million for these projects. There has been concern expressed to previous attempts to combine projects under these two authorizations.

Question. What is the justification for combining these projects?

Answer. PL-534 and PL-566 are very similar in nature with exception of how they are authorized. Justification for combining includes the following: eliminate a program as part of the reinvention process; and eliminate overlap between programs. Combining the funding for these projects allows more flexibility in determining where the funds are used so that Departmental priorities can be more effectively addressed.

Question. Would combining these projects jeopardize or have any influence on funding projects authorized under one program over another?

Answer. Combining the PL-566 and PL-534 is intended to strengthen the position of all watershed sponsors by addressing their resource needs uniformly. A single authority should generate greater local support than fragmented or split authorities do now. The state conservationist is still responsible for addressing the interests of both groups of sponsors and would still address resource problems and opportunities according to state and local priorities.

FARM BILL

Question. Now that the President has signed the Farm Bill, what changes do you see in the Natural Resources Conservation Service's role?

Answer. The NRCS is the Department's lead agency on most conservation programs. NRCS will be responsible for policy development, developing regulations, providing technical assistance, and program coordination. In setting policy for the conservation programs, NRCS will, nonetheless, also consult with the Farm Service Agency and other Department agencies, as appropriate. With respect to program delivery and concurrence procedures, NRCS will utilize State Technical Committees, Farm Service Agency state and county committees, and local soil and water conservation districts.

Question. Do you anticipate that you will submit amendments to your budget in response to passage of the farm bill?

Answer. We do not know if an amendment to our budget request for fiscal year 1997 will be submitted to the Congress. Some of the conservation programs authorized by the 1996 Farm Bill (FAIR Act) would be funded with discretionary appropriations requested and approved by the Congress. However, the majority of the conservation programs in the FAIR Act provide for funding through the Commodity Credit Corporation. We are currently analyzing the effect that the limitations set forth in Section 161 of the FAIR Act will have on the ability of NRCS to implement these programs.

Question. If you determine no budget amendments are necessary, will you notify this committee of any shifts in appropriated funds that are made to implement the farm bill?

Answer. Yes, the committee will be made aware of all proposals for funding shifts that are not within the authority provided in the Appropriations Act.

COLORADO RIVER SALINITY CONTROL PROGRAM

Question. Due to the funding limits of this subcommittee, the FY 96 appropriation for the Colorado River Basin Salinity Control Program was a reduction of \$1.9 million from the FY 95 appropriation of \$4.5 million. The FY 97 budget proposes to continue this program at the FY 96 appropriations level.

Since this program is included in the new Environmental Quality Incentives Program, do you anticipate this program, or its activities under the new title, will receive the same amount included in the budget?

Answer. The rules and regulations are currently being developed for EQIP and a specific funding level has not yet been developed. However, salinity control will remain a priority and receive funding in fiscal year 1997 through EQIP.

Question. Is this funding level adequate to sustain this program?

Answer. The funding level of \$2.681 million received in FY 1996 is adequate to continue funding about 35 to 40 percent of the annual contracts planned to achieve the long range implementation goals of the program.

CONSERVATION OPERATIONS

The budget proposes an increase of \$26.7 million for Conservation Operations. Included in this amount is \$3.9 million, a portion of which is to cover the costs of locating NRCS staff in USDA one-stop service centers.

Question. How much of this amount is for relocation costs?

Answer. The total relocation cost for fiscal year 1997 is estimated to be \$5.6 million compared with \$2.0 million in fiscal year 1996. The \$3.9 million increase would be used to partially fund relocating into USDA Service Centers and for other increased operating costs resulting from inflation.

Question. What is the status of relocating NRCS staff? What are the projected costs for relocations in the future?

Answer. Thirty-eight NRCS field offices have been moved or closed as of the start of fiscal year 1996. Another fifty-one are scheduled to be moved or closed during FY 1996 and fourteen more are scheduled for FY 1997. This would basically complete the relocations. No future relocation costs are anticipated unless leases cannot be terminated by the end of FY 1997 or the Service Centers are not ready to move into on schedule.

\$20 million is included in this increase for computerized databases and the development of geographic information systems.

Question. The FY 96 budget included a request for \$5.5 million for similar activities. How much did NRCS allocate for these purposes from its final appropriation?

Answer. NRCS allocated all of these funds for the development of digital orthophotography and for digitizing soils information. Excluding the \$20 million increase for acceleration of these activities at the Field Service Centers, it is estimated that about \$8 million will be used for these purposes in FY 1997.

Question. How much of the \$20 million will be used for computer hardware purchases? Please provide an explanation of the type of equipment to be purchased.

Answer. None of the \$20 million will be used to purchase computer hardware. From the \$20.0 million, we will use \$7.5 million to purchase digital orthophotography, and \$12.5 million to digitize soil surveys. Since digital orthophotography is developed by the commercial sector, no equipment is needed by NRCS. Soils are digitized using a variety of different sources. Within NRCS, we will use existing equipment and software for digitizing. Other soils digitizing will be contracted to the commercial sector or done through cooperative agreements with universities and state soil survey cooperators who have their own hardware.

Question. For hardware purchases made in FY 96 or proposed for FY 97, what specific circumstances existed or will exist that requires the Department to make the acquisitions prior to satisfying expectations set by this Committee with respect to the acquisition of new technology, including: completing reengineering; addressing oversight concerns; and developing a Departmentwide architecture?

Answer. NRCS has purchased approximately \$17,000,000 worth of computers to act as servers for its Field Office Computing System (FOCS) this fiscal year. Slightly over 1,900 computers were purchased. This action was taken to

complete an initiative begun in FY 1995 to replace obsolete systems which were incapable of supporting ongoing conservation operations at field offices and to prepare for added program delivery responsibilities under the recently enacted Farm Bill. These acquisitions were fully coordinated with Field Service Center partner agencies and the Department to ensure they were compatible with the planned USDA Service Center Common Computing environment technical architecture and shareable within that context. The recently purchased computers fulfill a dual need: permitting NRCS to sustain its current mission critical responsibilities and providing a logical migration path to the future Service Center Common Computing environment because they are reusable components in that architecture. Some business process reengineering in the form of greater utilization of georeferenced natural resource and client data has already been performed as a collaborative effort among NRCS, FSA, and RUS. The FOCS server acquisition provides an interim platform to support this initiative until a more permanent solution based on a Department wide technical architecture is completed. NRCS has no plans for major new technology acquisitions in FY 1997 that are not part of a coordinated Department technical architecture consistent with findings in ongoing business process reengineering efforts.

NRCS also has a requirement to support its recent reorganization including providing hardware and software for new organizational entities. The agency intends to make procurements in FY 1997 to implement recommendations of an administrative business process reengineering team which has been coordinated with appropriate Departmental initiatives, including the Field Service Center agencies.

Question. I notice in your prepared testimony that the geographic data must conform with the national GIS database standards. Who determines these standards? How much does compliance with these standards add to the cost of developing this database?

Answer. The Office of Management and Budget (OMB) issued Circular A-16 "Coordination of Surveying, Mapping, and Related Spatial Data Activities" in October 1990 encouraging federal agencies to develop and implement standards for collecting and distributing geospatial data. Circular A-16 assigned an interagency committee, the Federal Geographic Data Committee (FGDC) with responsibility to coordinate the development of geographic data. The FGDC provides leadership in coordinating the development of GIS database standards.

NRCS has federal responsibility for the National Cooperative Soil Survey on privately owned lands. Circular A-16 assigned NRCS the responsibility to provide leadership in coordinating the collection, maintenance, and distribution of digital soils data. NRCS first established GIS database standards in the 1980's specifically for digitizing soils. These standards have been revised over the years to accommodate changes in GIS technologies.

Commonly used data like the soils database produced to a common standard, enables users to share data more easily without having to duplicate database development. Development of digital geographic data is the largest cost factor in using a GIS. Soils data produced to a GIS database standard improves the transfer of soil data between different GISs, maintains the integrity and accuracy of the soil survey, allows soils data to be compatible with other GIS databases, and expands the use of soil information. The use of standards is of primary interest to both producers and users of spatially referenced data.

In some instances, it does cost more to develop a GIS database to meet a standard. In the case of NRCS soils database, the added cost is minimal compared to the total amount of dollars required to develop a GIS soils database. The primary purpose of digitizing to a standard is to eliminate the need for other agencies and users to re-digitize the soil maps to meet their requirements. Since our soils standard requires that the soil map be digitized on an accurate digital orthophototo map, no other users need to re-digitize NRCS soils data. Standards permit our data to be used consistently across political boundaries, which is important to NRCS staff at the local and state level. Standards help to reduce the need to duplicate database development which accounts for 75 percent of the cost to implement a GIS.

Question. How does the GIS Center for Advanced Spatial Technology's work fit into this initiative to increase the GIS database?

Answer. The Center for Advanced Spatial Technologies (CAST) located at the University of Arkansas is a major research and applied science center dedicated to making geographic information system (GIS) technologies available to researchers and professionals through a program of university-level teaching, research, development projects, and a short course curriculum designed to meet the needs of working professionals.

Under a current cooperative agreement, CAST and NRCS are working together to develop a digital GIS soils database in Arkansas. In FY 95, four county soil surveys were assigned to the CAST for soil digitizing and two county surveys were assigned in FY 1996. The NRCS provides funds to CAST for soil digitizing. As part of the cooperative agreement, CAST currently hosts an NRCS employee who is developing methods to improve NRCS field office delivery of GIS products to landowners and getting assistance from CAST staff in advancing the use of geospatial technologies in Arkansas. We hope to continue to have NRCS staff on campus and hosted by CAST.

NRCS utilizes the CAST as one of our training sites for providing NRCS employees with a working knowledge of GIS technologies, geospatial database development, and software use.

Question. Do you intend to utilize this center more in FY 97 to conduct this work?

Answer. NRCS and CAST have a history of cooperation since 1988. CAST efforts have focused on analysis and design of NRCS databases, digital data development, software design and development and training. We will, no doubt, continue in the future to cooperatively fund various projects that mutually support the mission of NRCS, CAST, and our partners, however we cannot commit additional staffing or funding resources beyond what is presently being supported.

If soil digitizing funds are allocated to NRCS in FY 1997, our NRCS state office is planning to have two county soil surveys digitized by CAST.

Within Arkansas, a state initiative to develop a GIS database for a sizable area in the eastern part of the state is presently in the planning stage. NRCS and CAST would play a major role in developing the soils database.

WETLANDS RESERVE PROGRAM

Question. What is the status of the pilot program that NRCS began to help implement the WRP by non-government entities?

Answer. A number of pilot partnership efforts are now underway. NRCS has entered into a formal agreement with the National Fish and Wildlife Foundation whereby the Foundation will be helping to leverage funds and to locate ecologically sound and cost effective easement opportunities. Under the agreement, NRCS will make available \$5,000,000 of appropriated funds that will be matched through outreach efforts of the Foundation. A number of potential projects and funding donors have been tentatively located. Several of the projects are now entering the detailed negotiation stage.

In addition, other partnership opportunities have flourished. For example, the Nature Conservancy is a major partner in completion of a large project in the Klamath Basin of Oregon. Several efforts involving local municipalities and the Nature Conservancy are underway in California. The Indiana Department of Natural Resources and the Illinois Department of Natural Resources are both working with NRCS to develop projects in their respective states. NRCS and Ducks Unlimited have entered into an agreement to facilitate project restoration efforts in Louisiana and discussions are underway concerning a similar agreement in Mississippi. The Forest Service and the Fish and Wildlife Service are assisting with realty acquisition requirements associated with easements in several northeastern and midwestern states.

Question. It is my understanding that one of the reasons this pilot program was established was to see if other partners can help support the WRP. Is there enough flexibility in the law and in USDA's regulations to promote creative conservation approaches and the best possible projects under WRP.

Answer. The current structure of the program provides excellent flexibility. We have found that the opportunity to work in creative partnership with other public and private entities is an excellent approach. Contribution ratio requirements, such as 1:1 matching of funds, may prove too restrictive in some cases, and NRCS supports more qualitative guidelines.

Question. It seems that the opportunity for payment disparity exists based on the payment structure for the Wetlands Reserve Program versus that for the Conservation Reserve Program. An example of this is that a ten-year CRP contract for \$50 per acre would yield \$500 over the life of the contract. While a 30 year, non-permanent easement WRP contract, with a life of thirty years, which pays 50% of the value of an acre valued at \$500, would only yield \$250.

How can you better address this obvious disparity, where a shorter term contract yields a higher payment to the landowner than a longer contract?

Answer. The question assumes that a landowner would receive the full agricultural value of the land over the course of a ten-year contract. Based on this assumption, it must be clarified that the statutory schemes for compensation to the landowner differs between the CRP and the WRP and the effect of the contractual obligations also differs. The CRP statute provides that the compensation paid to an owner or operator may be "the amount necessary to encourage owners or operators to participate in the program." The WRP statute mandates that the compensation

paid to a landowner cannot exceed the fair market value of the easement. WRP payments are generally based on an appraisal of the agricultural value of the specific tract of land at the time the land is offered for enrollment.

In the case of the 30-year easement, the payment rate is set at 50% of the agricultural value. Following a strict economic calculation of the present value of the limited-duration stream of expected earnings and utilizing presently established interest rates, the value paid could be increased to as much as 58.8 percent if all economic uses of the easement are being constrained for the full 30-year duration of the easement. However, under WRP compatible economic uses such as haying, grazing, and timber harvest may be allowed. In addition, economic returns from recreational and hunting endeavors, and even commercial harvest of species such as crawfish, is allowed. Furthermore, the restoration plan being implemented on the easement will in most instances enhance some of these potential income producing qualities of the land. Thus, in recognition of these economic factors and that the ecological value is limited in comparison to that associated with a permanent easement, the 50 percent payment rate has been determined to be fair compensation and within the statutory guidelines.

In the case of the 10-year CRP contract, CRP payment rates for the most recent sign-up were based on average county rental rates and average soil productivity adjustments. In some instances bonus payments, as provided by statute, were included for enrollment of certain priority lands or for partial field enrollment. An annual management payment of up to \$5 per acre was also potentially available.

Question. Please provide a state-by-state list of the cost per acre of lands enrolled in the most recent WRP sign-up.

[The list follows:]

Wetlands Reserve Program**Cost per acre estimate for permanent easements****Sign-up 3, 1995**

State	Cost Per Acre	State	Cost Per Acre
Northern Plains		East Region	
Colorado	\$425	Conn.	\$1,518
Nebraska	1,125	Delaware	1,923
Wyoming	927	Maine	166
Kansas	601	Maryland	662
No. Dak.	411	Mass.	1,395
Montana	735	N.Jersey	372
So. Dak.	367	New Ham.	816
		N. York	765
		Penn.	852
Midwest Region		Rhode Is.	na
Illinois	880	W. Virginia	712
Michigan	925	Vermont	934
Ohio	953		
Indiana	970	South Region	
Minnesota	1,009	Alabama	866
Wisconsin	584	Florida	458
Iowa	1588	Georgia	782
Missouri	881	Kentucky	1,155
		Miss.	615
West Region		No. Carol.	771
Alaska	240	So. Carol.	857
Idaho	608	Tenn.	914
Utah	na	Virginia	1,722
California	1,748	South Central Region	
Nevada	na	Arkansas	788
Hawaii	na	Louisiana	671
Oregon	1,087	Texas	706
Wash.	1,361	Oklahoma	492
N. Mex.	na		
Arizona	na		

MINORITY OWNED LANDS ENROLLED IN WRP

Question. Also, please provide a list by state of minority-owned lands enrolled in the WRP.

Answer. Lands being enrolled in the WRP are being evaluated on the basis of ecological values and cost efficiency. As such, NRCS has not maintained any formal listing of characteristics of the landowners themselves. Each time there has been a program sign-up, efforts have been made to ensure that all landowners are made aware of the opportunity to participate. This occurs primarily through national, state, and local level news releases and participation on local radio and television farm shows.

Through information provided by the NRCS state offices, we have been able to determine the following about minority landowners who are known to be enrolled in the program.

STATE	MINORITY ENROLLED	ACRES
CA	1	112
CO	1	134
LA	1	11
NY	1	84
OH	1	349
WY	1	40
OK	4	866

STAFFING EXPENSES AND TRAVEL

Question. To what extent, if any, are expenses of the Office of the Under Secretary for Natural Resources and Environment, including those of staff, being charged to the Natural Resources Conservation Service or other USDA agency?

Answer. There are currently 12 employees working out of the Under Secretary's office. Five of these employees are being paid out of Office of the Secretary funds, the remaining seven are charged to the agencies under the jurisdiction of this office.

Question. Please provide the FTE's funded in the FY 96 appropriation for the Office of the Under Secretary for Natural Resources and Environment and the current on-board staffing level (FTE equivalent) in this office.

Answer. There are six available staff years for this office. Five of these are on board and fully funded at this time.

Question. What is your policy on detailing USDA or other federal agency personnel to the Office of the Under Secretary for Natural Resources and Environment?

Answer. A key part of the mission of the Office of the Under Secretary for Natural Resources and Environment (NRE) is to help make the Natural Resources Conservation Service (NRCS) and the Forest Service (FS) as successful as possible in achieving their missions and their objectives in conformance with their authorizing legislation and the associated Administration policy. With this in mind, our policy regarding employee details is as follows: We turn to the USDA agencies and other

Federal agencies to provide this office the basic and fundamental support necessary to help us ensure that the missions and objectives of the NRE agencies are adequately represented and implemented. This support involves clerical, administrative, and public outreach activities, and other day-to-day support for office management functions. In addition, there can be key activities beyond clerical and administrative support of greater importance to the NRE agencies and the Department, and we have turned to the agencies to assist us with such initiatives. An example is the Agricultural Office on Environmental Quality which by statute is assigned to NRE. This office is staffed by an NRCS detailee who, in addition to other activities, is playing a leadership role in Department-wide pesticide policy issues.

Question. Please provide a comprehensive list of all USDA or other Federal agency detailees to your office in the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer. We will provide that list for the record.

[The list follows:]

US DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

List of Details

Employee Name	Length of Detail	Employing Office	Purpose of Detail
Hennietta Degroot	4/8/96 - 6/30/96	US Department of Transportation	Part of the Presidential Management Intern Program and Management Training program. Part of the program's purpose is to provide new Federal employees exposure to government agencies besides their home office.
Lawrence Elworth	5/1/94 - Present	NRCS	Provide technical advice on policy issues impacting pesticide reform; coordinates intra-department pesticide policy and environmental program activities.
Mark Gaede	3/24/93 - 3/16/96 3/17/96 - Present	NRCS Converted to Office of the Under Secretary	Provide program and policy guidance to the Secretary related to natural resource issues. related to natural resource issues.
Richard Grand	5/30/93 - Present	NRCS	Provide policy support for natural resource issues.
Stephanie Hague	8/22/93 - Present	NRCS	Provide policy support for natural resource issues.
Kimberly C. Queen	2/16/93 - Present	NRCS	Provide administrative support.
Judy Smith	3/3/96 - Present	NRCS	Provide assistance in NRCS/NRE strategic planning coordination.
Joyce L. Snyder	12/92 - Present	FS	Provide administrative support.

List of Details (continued)

Employee Name	Length of Detail	Employing Office	Purpose of Detail
Linda K. Turner	10/95 - Present	FS	Provide administrative support.
Monica Warren	3/96 - 5/96	FS	Provide administrative support.
Allison Biggs	5/24/93 - 12/26/93 12/93 - 4/95	NRCS FS	Provide administrative support and coordination
Sandy Byrd	10/95 - 2/96	NRCS	Provide technical assistance in strategic planning, and policy development, strategic planning effort, NRE/NRCS. Annual performance plan; gain high level policy formulation experience.
Patricia Cimino	6/95 - 12/95	EPA	Assist the Office of the Under Secretary with overall USDA policy on pesticides and pest management, coordination of USDA policy with EPA, FDA, and oversight of USDA participation in international environmental initiatives.
Gary Larsen	6/25 - 2/96	FS	Chief of staff to the Under Secretary for NRE - Monitored key issues.
Jeffrey Loser	5/95 - 7/95	NRCS	Provide technical assistance in policy development, strategic planning effort, NRE/NRCA Annual Performance plan, gain high level policy formulation experience.
Lillyvette Montalvo	7/95 - 9/95	NRCS	Provide technical assistance in policy development, strategic planning efforts, gain high level policy formulation experience.

List of Details (continued)

Employee Name	Length of Detail	Employing Office	Purpose of Detail
Sherry L. Turner	2/95 - 8/95	FS	Provide administrative support.
Carol Whitman	1/95 - 5/95	Global Climate Change Office	Assist the Office of the Under Secretary with overall USDA policy on pesticides and pest management, coordination of USDA policy with EPA, FDA, and oversight of USDA participation in international environmental initiatives.

STAFFING EXPENSES AND TRAVEL

Question. Are employees of the Natural Resources Conservation Service currently detailed to other USDA or other Federal agency offices?

Answer. Besides the five detailees currently in the Office of the Under Secretary for NRE, we do not have any other employees in an official detail status. However, we may enter into informal agreements with other Federal agencies to provide technical assistance for varied lengths of time. These projects may last from a week to a year.

Question. Please provide a comprehensive list of all NRCS employees detailed in the past year, the length of detail, and the purpose of the detail.

Answer. We will provide a list of employees detailed to the Office of the Under Secretary for NRE for the record.

[The list follows:]

NAME	LENGTH OF DETAIL	PURPOSE OF DETAIL	EMPLOYING OFFICE
Kimberly Queen	2/16/93 to present	Provide Administrative support	NHQ Administrative support Staff, NRCS
Richard Grand	5/30/93 to present	Monitors issues impacting NRCS	Office of the Chief, NRCS
Stephanie Hague	8/22/93 to present	Monitors issues impacting NRCS.	Office of the Chief, NRCS
Mark Gaede	3/24/93 to 3/17/96	Provided advice on NRCS partnerships in new and expanding agric. programs monitored special develop- ments and issues impacting NRCS.	Office of the Chief, NRCS
Lawrence Elworth	5/1/94 to present	Provides technical advice on policy issues impacting pesticide reform; coordinates intra-department pesticide policy and programs activities.	Office of the Chief, NRCS
Jeffrey Loser	5/95 to 7/95	Provide technical assistance in policy development, strategic planning effort, NRE/NRCS Annual Perf. Plan; gain high level policy formulation experience.	Conservation and Ecosystem Assistance, NRCS
Lillyvette Montalvo	7/95 to 9/95	Provide technical assistance in policy development, strategic planning efforts, Gain high level policy formulation experience.	1890/HACU Initiatives, NRCS

Sandra Byrd	10/95 to 2/96	Provide technical assistance in strategic planning, and policy development; Gain high level policy formulation experience.	Watersheds and Wetlands, NRCS
Judy Smith	3/3/96 to present	Provide assistance in NRCS/NRE strategic planning coordination.	Quality Mgmt./ Program Evaluation, NRCS

Question. Please provide a detailed list of all foreign travel taken by the Under Secretary for Natural Resources and Environment, or any employee of his office, or of the Natural Resources Conservation Service, including: duration, destination, cost, purpose, and account charged for cost of the travel.

Answer. We will provide the detailed lists for the record.

[The lists follow:]

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

List of Foreign Travel - Office of the Under Secretary for Natural Resources and Environment

Employee	Duration	Destination	Purpose	Accounting	Cost
Adela Backiel	10/16/94 to 10/21/94 (6 days)	Guadalajara, Mexico	Keynote Speaker	NRE	\$1,465.98
Adela Backiel	3/13/95 to 3/18/95 (6 days)	Rome, Italy	Conference Attendance	Department of State	\$1,795.58

Name	Work Place	Activity Code	Country/ies	Travel Dates	Travel Costs Actual	Purpose	Funding Source
Susan Southard	CA	STE	Russia	08/26-09/08	2,477	Soil taxonomy testing and sampling	NRCS/NHQ
Edwin Mas	PR	STE	Thailand	07/06-07/21	4,235	Germplasm and bioengineering practices	FAS/ICD
Luis Soto	PR	STE	Thailand	07/06-07/21	4,063	Germplasm and bioengineering practices	FAS/ICD
John Sutton	NHQ	STE	United Kingdom	06/10-06/26	4,096	Reduction of agricultural pollution in water	FAS/ICD
Rosendo Trevino	NM	STE	United Kingdom	06/10-06/26	3,445	Reduction of agricultural pollution in water	FAS/ICD
Stefanie Aschmann	WNTC	STE	United Kingdom	06/10-06/26	3,764	Reduction of agricultural pollution in water	FAS/ICD
Bobby Ward	SNTC	STE	United Kingdom	09/10-09/23	3,074	Maintaining and improving soil survey operations	NRCS/NHQ
Javier Ruiz	SNTC	STE	United Kingdom	09/10-09/23	2,754	Maintaining and improving soil survey operations	NRCS/NHQ
Carmen Santiago	PR	STE	United Kingdom	09/10-09/23	3,461	Maintaining and improving soil survey operations	NRCS/NHQ
Jacy Gibbs	WNTC	IM	Argentina	11/03-11/21	2,879	Plant genetic resources, desertification and sustainability	NRCS/NHQ
George Bluhm	NHQ	IM	Austria	12/03-12/08	2,059	Mitigation of emission of greenhouse gas	NRCS/Climate Chg.
John Edwards	MI	IM	Canada	10/12		Great Lakes Regional Council, Toronto, Ontario	NRCS/MI
Douglas Gasseling	ND	IM	Canada	10/25-10/28	278	Manitoba/ND Tillage Farmers Association	NRCS/ND
Douglas Gasseling	ND	IM	Canada	06/26-06/28	156	Manitoba/ND Tillage Farmers Association	NRCS/ND
Steven Davis	OH	IM	Canada	11/07-11/08	176	Lake Erie Management Plan Workshop	NRCS/OH
Dennis Shoup	SD	IM	Canada	01/22-01/25		Manitoba/ND Zero Tillage Association	NRCS/SD
Jason Miller	SD	IM	Canada	01/22-01/25		Manitoba/ND Zero Tillage Association	NRCS/SD
Robert Burris	OH	IM	Canada	02/26-02/28	729	Lake Erie Lakewide Management Committee, Ontario	NRCS/OH
Robert Burris	OH	IM	Canada	06/12-06/14	217	Lake Erie Lakewide Management Work Group, Ontario	NRCS/OH
John Kimble	MNTC	IM	Canada	03/15-03/19		25th Arctic Workshop, Ontario	NRCS/MNTC
Sharon Waltman	MNTC	IM	Canada	04/03-04/07		Soil organic carbon map in Ottawa, Ontario	NRCS/MNTC
Robert Burris	OH	IM	Canada	04/20-04/23	295	Great Lakes Basin comprehensive farm planning network	NRCS/OH
Richard Lewis	NY	IM	Canada	04/20-04/23	743	Great Lakes Basin comprehensive farm planning network	NRCS/NY
Douglas Helmers	MO	IM	Canada	05/10-5/13		Western Hemisphere Shorebird Reserve Workshop, Ottawa	NRCS/MO
David Garen	WNTC	IM	Canada	05/16-05/18	717	Mountain Hydrology, Vancouver, British Columbia	NRCS/WNTC
Garry Schaefer	WNTC	IM	Canada	05/21-05/26	744	Cold-Season/Region Hydrometeorology, Banff, Alberta	NRCS/WNTC
John Kick	NY	IM	Canada	06/06-06/08	659	52nd Eastern Snow Conference, Toronto, Ontario	NRCS/NY
David Garcelon	ME	IM	Canada	06/07		St. Croix Estuary Project, St. Andrews, New Brunswick	NRCS/ME
Lex Riggall	MT	IM	Canada	06/11-06/15		5th Stockmen's Range Management Course, Alberta	NRCS/MT
Steve Holzhey	MNTC	IM	Canada	06/17-06/23		Soil Science Annual Meeting	NRCS/MNTC
Wesley Ewine	ND	IM	Canada	06/26-06/27	292	Manitoba/ND Tillage Farmers Association	NRCS/ND
William Waltman	MNTC	IM	Canada	07/10-07/13		Great Lakes Ag Profile Project, Guelph, Ontario	NRCS/MNTC
Raymond Sinclair	MNTC	IM	Canada	07/10-07/13		Great Lakes Ag Profile Project, Guelph, Ontario	NRCS/MNTC

Name	Work Place	Activity Code	Country/ies	Travel Dates	Travel Costs Actual	Purpose	Funding Source
Alfonso Norwood	MI	IM	Canada	08/08		St. Clair River Binational Public Advisory Council	NRCS/MI
Robert Eddleman	IN	IM	Canada	09/05-09/09		Great Lakes Commission, Quebec City	NRCS/IN
James Schmidt	AK	IM	Canada	09/19-09/21		Southeast Alaska conference, Whitehorse, Yukon Territory	NRCS/AK
Richard Arnold	NHQ	IM	Canada	08/25-09/07		Land evaluation and reclamation work	NRCS/NHQ
Anne Hillaard	VT	IM	China	08/27-09/08	5,178	Non-Governmental Organizations Forum on Women	NRCS/NHQ
Mary Ann McQuinn	NHQ	IM	China	08/27-09/08	4,272	Soil-Source and sink of greenhouse gases, Nanjing	NRCS/Global Funds
John Kimble	MNTC	IM	China	09/15-09/23		Conservation practices	NRCS/NHQ
Ruben Dayrit	PONH	IM	China	09/19-09/27		Groundwater quality management	NRCS/NHQ
Thomas Iivari	NNTC	IM	Czech Republic	05/13-05/19	2,809	Water quality specialized conference on Diffuse Pollution	EPA
Lyn Kirschner	IN	IM	Czech Republic	08/09-08/21		Irrigation management systems project	
Clifford Duke	NHQ	IM	Egypt	09/23-09/27		Atoll Agroforestry Workshop	NRCS/FS
Robert Wescom	GU	IM	Fiji/Western Samona	09/21-09/29		OECD Workshop, Paris	NRCS/NHQ
Peter Smith	NHQ	IM	France	12/10-12/15	1,334	OECD Workshop, Paris	NRCS/NHQ
Ann Carey	NHQ	IM	France	06/20-06/21	1,403	OECD Pesticide Forum, Paris	NRCS/NHQ
Norman Helzer	NE	IM	Germany	04/02-04/07		World Soil Reference Base for Soil Classification	
Ronald Paetzold	MNTC	IM	Germany	07/30-08/06		Data and information working group	NRCS/Global Funds
Carolyn Olson	MNTC	IM	Germany	08/03-08/23	5,773	International union for quaternary research	NRCS/NHQ
James Culver	MNTC	IM	Germany	09/23-09/30		Geosphere/Biosphere Programme-Global Analysis	NRCS/Global Funds
Edward Weber	WI	IM	Hungary/Turkey	09/12-09/21		Management issues, agricultural issues, and marketing	
Richard Arnold	NHQ	IM	India	12/02-12/09		International Soil Conservation Organization Conference	
Hari Eswaran	NHQ	IM	India	12/02-12/09		International Soil Conservation Organization Conference	
David Schertz	NHQ	IM	India	12/02-12/09	3,687	International Soil Conservation Organization Conference	NRCS/NHQ
William Broderson	MNTC	IM	Italy	10/17-11/03		Workshop on global soils data task force	
C.J. Heidt	ND	IM	Italy	10/17-11/03		Workshop on global soils data task force	
Clifford Doke	NHQ	IM	Italy	09/19-09/22		FAO-sponsored activities	
Hari Eswaran	NHQ	IM	Malaysia	09/09-09/16	8,473	Sustainable land management	
William Boyd	MNTC	IM	Mexico	03/04-03/10		Swine waste management workshop	Govt of Mexico
Robert Purdom	TX	IM	Mexico	06/11-06/14		Agriculture and water quality conference	NRCS/TX
Alfonso Leal	TX	IM	Mexico	06/11-06/14		Agriculture and water quality conference	NRCS/TX
Carl Lucero	NM	IM	Mexico	06/11-06/14	500	Agriculture and water quality conference	NRCS/NHQ
Russell Almaraz	NHQ	IM	Nigeria	08/18-08/27	3,500	3rd All African Soil Science Conference	NRCS/NHQ
Richard Arnold	NHQ	IM	Russia	08/12-08/24		Global changes and geography conference	NRCS/Global Funds

Name	Work Place	Activity Code	Country/ies	Travel Dates	Travel Costs Actual	Purpose	Funding Source
Peter Smith	NHQ	IM	Spain	10/14-10/22	1,919	Spanish workshop on forestry, agriculture, & environment	NRCS/NHQ
Scott Peterson	LA	IM	Spain	09/26-10/08	1,538	Plant information for biological sciences	APHIS
Joan Perry	GU	IM	Taiwan	05/21-06/02	670	Sino-American workshop on steep soil erosion estimation	NRCS/NHQ
Zachary Reed Sims	GU	IM	Taiwan	05/21-06/02		Sino-American workshop on steep soil erosion estimation	
Clifford Duke	NHQ	IM	Taiwan	05/21-06/02		Sino-American workshop on steep soil erosion estimation	
Patricia Paul	VA	IM	Thailand	06/01-06/12	3,053	Concepts, strategies, implementation and adoption	NRCS/NHQ
Michael Kolman	HI	IM	Thailand	06/01-06/12	300	Concepts, strategies, implementation and adoption	NRCS/NHQ
Gary Margheim	NHQ	IM	The Netherlands	02/18-02/23	1,232	Integrated planning and management of land resources	NRCS/NHQ
Dewayne Mays	MNTC	IM	The Netherlands	08/04-08/11	2,270	Soil and plant analysis, Wageningen	NRCS/NHQ
Thomas Leverman	NHQ	IM	United Kingdom	04/26-04/28		International education business partnership conference	NRCS/NHQ
Ellis Benham	MNTC	IM	United Kingdom	05/20-05/28		North Atlantic Treaty Organization's Soil Workshop	NRCS/Global Funds

Name	Work Place	Activity Code	Country/ies	Travel Dates	Travel Costs Actual	Purpose	Funding Source
Roy Mann	WNTC	TA	Mexico	03/13-03/18		Future technical assistance work	PRODERITH
John Marc Safley	NHQ	TA	Poland	06/22-07/01		U.S. Climate Studies Management Project	DOE
Martin Buck Burch	KS	TA	Russia	10/14-10/24		Small watershed management project	EPA
Glenn Weesies	IN	TA	Taiwan	05/20-06/03		Workshop on use of USLE/RUSLE	Govt of Taiwan
Thomas Reinsch	MNTC	STE	Argentina	08/26-09/10	5,548	Identification and sampling of Mollisols	NRCS/NHQ
Ronald Paetold	MNTC	STE	Argentina	08/26-09/20	4,109	Identification and sampling of Mollisols	NRCS/NHQ
Deborah Prevost	NM	STE	Argentina	08/26-09/20	5,023	Identification and sampling of Mollisols	NRCS/NHQ
Ramona Garner	NM	STE	Australia	05/13-05/27	4,052	Plant materials	NRCS/NHQ
Bruce Munda	AZ	STE	Australia	05/13-05/27	3,831	Plant materials	NRCS/NHQ
John Lloyd-Reilly	TX	STE	Australia	05/13-05/27	3,795	Plant materials	NRCS/NHQ
Gary Fak	MO	STE	Australia	06/09-06/22	5,028	Economic diversification projects in agriculture & forestry	NRCS/NHQ
Dennis Hilger	IA	STE	Australia	06/09-06/22	4,810	Economic diversification projects in agriculture & forestry	NRCS/NHQ
Rita Mueller	MO	STE	Australia	06/09-06/22	5,088	Economic diversification projects in agriculture & forestry	NRCS/NHQ
David Burgdorf	MI	STE	Austria/Germany/Italy/Swit	09/01-09/16	5,933	Restoration of ecosystems	FAS/ICD
Jerry Bernard	NHQ	STE	Austria/Germany/Italy/Swit	09/01-09/16	3,498	Restoration of ecosystems	FAS/ICD
Ronald Tuttle	NHQ	STE	Austria/Germany/Italy/Swit	09/01-09/16	3,430	Restoration of ecosystems	FAS/ICD
David Dyer	CA	STE	Chile	03/11-03/25		Plant materials	FAS/ICD
John Kimble	MNTC	STE	China	07/23-08/09	6,364	Soil taxonomy testing and sampling	NRCS/NHQ
Marcus Clark	AK	STE	China	07/23-08/09	5,974	Soil taxonomy testing and sampling	NRCS/NHQ
Joseph Moore	AK	STE	China	07/23-08/09	6,144	Soil taxonomy testing and sampling	NRCS/NHQ
Bruce Wight	MNTC	STE	China	09/16-09/29	3,982	Windbreaks and shelterbelts	NRCS/NHQ
Russell Haas	ND	STE	China	09/16-09/29	3,153	Windbreaks and shelterbelts	NRCS/NHQ
Steven Pernsteiner	WI	STE	Denmark	09/10-10/10	445	Windbreak technology	Comm. for Agric.
Thomas Wilson	OK	STE	Denmark	09/10-10/10	637	Windbreak technology	Comm. for Agric.
Arlene Brandt-Jenso	SD	STE	Denmark	09/10-10/10	481	Windbreak technology	Comm. for Agric.
Jay Fuhrer	ND	STE	Denmark	09/10-10/10	530	Windbreak technology	Comm. for Agric.
Scott Peterson	LA	STE	Germany/Scotland	03/11-03/24	4,533	PLANTS Database	FAS/ICD
Wendell Oaks	CO	STE	Germany/Scotland	03/11-03/24	4,568	PLANTS Database	FAS/ICD
Rafael Salazar	OH	STE	Honduras	08/05-08/19	2,021	Materials for cover crops	NRCS/NHQ
Jon Warner	OH	STE	Honduras	08/05-08/19	1,969	Materials for cover crops	NRCS/NHQ
Sandra Chenal	OH	STE	Honduras	08/05-08/19	2,205	Materials for cover crops	NRCS/NHQ
DeWayne Williams	MNTC	STE	Russia	08/26-09/08	5,572	Soil taxonomy testing and sampling	NRCS/NHQ
Warren Lynn	MNTC	STE	Russia	08/26-09/08	3,299	Soil taxonomy testing and sampling	NRCS/NHQ

USDA NRCS INTERNATIONAL CONSERVATION DIVISION
FY 1995 BUDGET AND ACCOUNTS

TA = Technical Assistance
STE = Scientific and Technical Exchanges
IM = International Meetings and Related Travel

Name	Work Place	Activity Code	Country/ies	Travel Dates	Travel Costs Actual	Purpose	Funding Source
Hari Eswaran	NHQ	TA	Albania	03/10-03/24	3,242	Impacts of land privatization and assessment methods	TROPSOILS
Hari Eswaran	NHQ	IM	Thailand	04/27-05/12	2,971	Soil analysis and use of data	TROPSOILS
Hari Eswaran	NHQ	TA/IM	Albania/Greece	05/18-05/28	3,965	Land protection & management/Mediterranean Soils	TROPSOILS
John Kimble	MNTC	IM	Thailand	04/27-05/12		Soil analysis and use of data	TROPSOILS
John Kimble	MNTC	TA/IM	Albania/Greece	05/18-05/28	4,855	Land protection & management/Mediterranean Soils	TROPSOILS
Hari Eswaran	NHQ	TA	Peru/Brazil	07/27-08/13	3,903	Alternative to Slash and Burn Project/Soil Mapping	TROPSOILS
Hari Eswaran	NHQ	IM/TA	Germany/Hungary	04/02-04/14	3,789	Soil classification/soil characterization	TROPSOILS
Norman Helzer	NE	TA	Hungary	04/08-04/14	3,743	Soil characterization	TROPSOILS
Hari Eswaran	NHQ	TA/IM	Italy/India/Thailand	08/31-09/21		Soil resources/sustainable agriculture/land management	TROPSOILS
Hari Eswaran	NHQ	TA/IM	Thailand/India/Kenya	11/23-12/18	5,254	Soil water nutrient/Silver Jubilee/land quality indicators	TROPSOILS
Hari Eswaran	NHQ	TA/IM	Kenya/Ghana	01/19-02/12	6,245	Desert margins project/environmental assessment	TROPSOILS
Ronald Schierer	CO	TA	Bolivia	01/16-03/11	2,308	Erosion control & reservoir sedimentation, Cochabamba	VOCA
C. Steven Holzhey	MNTC	TA	Brazil	11/05-11/25		Design and implement soil surveys in Pernambuco	EMBRAPA/ICA
Roy Vick	PR	TA	Brazil	11/05-11/25		Design and implement soil surveys in Pernambuco	EMBRAPA/ICA
Jerrill L. Lemunyon	SNTC	TA	Bulgaria	10/14-10/25		Environmental contamination of agricultural lands	FAS/ICD
Jerrill L. Lemunyon	SNTC	TA	Bulgaria	06/23-07/03		Monitoring and demonstration activities	FAS/ICD
Bruce Baska	ND	TA	Canada	08/03		Grass seedling, grazing rotation, plant identification	NRCS/ND
Emery Duben	ND	TA	Canada	08/03		Grass seedling, grazing rotation, plant identification	NRCS/ND
John Dickerson	NY	TA	Canada	08/28-08/30	293	Wildlife habitat plantings, Guelph and Simco, Ontario	NRCS/NY
Russell Haas	ND	TA	Canada	08/28-09/01	235	Wetland restoration/habitat programs	Ducks Unlimited
Dwight Tober	ND	TA	Canada	08/28-09/01	235	Wetland restoration/habitat programs	Ducks Unlimited
Bernman Hudson	NC	TA	Indonesia	07/05-07/25		Training on forest health monitoring indicators	USAID
Margaret Thrasher	PA	TA	Latvia/Russia	02/28-03/31	3,636	Technical service offices	VOCA
Ronald Thomas	MS	TA	Mexico	11/06-11/12		Crawfish-rice project	Rice Growers Assoc
Jeffrey Vonk	NHQ	TA	Mexico	03/15-03/18		Future technical assistance work	PRODERITH

**USDA NRCS INTERNATIONAL CONSERVATION DIVISION
FY 1996 BUDGET AND ACCOUNTS**

TA = Technical Assistance

STE = Scientific and Technical Exchanges

IM = International Meetings and Related Travel

Name	Work Place	Activity Code	Countries	Travel Dates	Travel Costs Actual	Purpose	Funding Source
Steven Pernsteiner	WI	STE	Denmark	09/11-10/10	445	Windbreak Technology	Comm. for Agric.
Thomas Wilson	OK	STE	Denmark	09/11-10/10	637	Windbreak Technology	Comm. for Agric.
Arlene Brandt-Jenso	SD	STE	Denmark	09/11-10/10	481	Windbreak Technology	Comm. for Agric.
Jay Fuhrer	ND	STE	Denmark	09/11-10/10	530	Windbreak Technology	Comm. for Agric.
Scott Peterson	LA	IM	Spain	09/27-10/08	1,538	Plant Information for Biological Sciences	APHIS
Steven Davis	OH	IM	Canada	10/03-10/05	205	Management Subcommittee Meeting, Ontario	NRCS/OH
Steven Brady	CO	IM	France	10/08-10/14	1,260	PERDIX VII International Symposium	NRCS/CO/NHQ
Jeff Goebel	NHQ	IM	France	10/08-10/14	1,730	OECD Meeting, Agriculture & the Environment	NRCS/NHQ
Dana Chapman	NY	IM	Canada	10/10-10/12	225	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/NY
Raymond Casey	NY	IM	Canada	10/10-10/12	721	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/NY
Charles Galgowski	NY	IM	Canada	10/10-10/12	231	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/NY
David Nelson	MA	IM	Canada	10/10-10/12	237	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/MA
Timothy Murphy	PA	IM	Canada	10/10-10/12	286	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/PA
John Zaginaylo	PA	IM	Canada	10/10-10/12	249	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/PA
Frank Harvatine	PA	IM	Canada	10/10-10/12	279	U.S. Resource Mgmt. Service Tour, Ontario	NRCS/PA
Ann Carey	NHQ	IM	Canada	10/11-10/13	1,818	FAS Symposium, Sustainable Use of Natural Resources	NRCS/NHQ
John Wilson	MI	IM	Canada	10/11-10/14	395	Lake Erie Lakewide Management Committee Meeting	NRCS/MI
Peter Smith	NHQ	IM	Sweden	10/16-10/21	2,366	OECD Workshop, Pesticide Risk Reduction	NRCS/NHQ
Richard VanKlaver	CA	TA	Egypt	10/19-11/03	4,292	Drainage Water Irrigation Project	Louis Berger
Dennis Moore	CA	TA	Egypt	10/19-11/03	4,228	Drainage Water Irrigation Project	Louis Berger
Frederick Kaisaki	NE	TA	Egypt	10/19-11/03	4,064	Drainage Water Irrigation Project	Louis Berger
John Kimble	NE	IM	China	10/22-10/27	3,893	International Geosphere/Biosphere Program	NRCS/Global Funds
Robert Gavenda	HI	IM	Indonesia	10/27-11/04	2,539	Conference on Forest Soils	NRCS/NHQ
Jeffrey Printz	ND	IM	Canada	11/01-11/04	366	Northern Great Plains Conference, Saskatchewan	NRCS/ND

Jerrill Lemunyon	TX	TA	Dom. Republic	11/13-11/17	2,190	Technical Needs Assessment & Monitoring Plans	IICA
Robin White	CA	IM	Australia	11/19-11/23	2,741	Pacific Conference on Earthquake Engineering	NRCS/NHQ
Roy Mann	OR	TA	Mexico	11/19-12/15	2,434	Rehabilitation Measures on Native Rangelands	SARH
John Kimble	NE	IM	Senegal/Switzerland	11/27-12/07	4,959	Food Security for 21st Century/Climate Change	NRCS/Global Funds
Lawrence Elworth	NHQ	IM	Austria	12/03-12/08	2,070	Substances that Deplete the Ozone Layer	USDA/SEC
Stephen Hundley	NH	IM	Philippines	12/04-12/08	2,395	Forum on Land Management	NRCS/NHQ
Brian Huberty	WI	IM	Canada	12/05-12/09	653	Remote Sensing in Forest Vegetation, Ontario	NRCS/WI
Peter Smith	NHQ	IM	France	12/10-12/14	2,063	OECD Meeting, Agriculture & Environment	NRCS/NHQ
Ann Carey	NHQ	IM	France	01/07-01/10	1,688	Sixth Ad Hoc Informal Meeting of OECD	NRCS/NHQ
Darrell Emmick	NY	IM	Canada	01/07-01/12	811	Prescribed Grazing Management	NRCS/NY
John Kimble	NE	IM	Russia	01/08-01/18	3,831	Executive Committee, International Society of Soil Science	NRCS/Global Funds
Denise Doetzer	VA	STE	Australia	01/13-01/27	6,378	Ecosystem Based Assistance Decision Support	FAS/ICD
David Faulkner	VA	STE	Australia	01/13-01/27	5,506	Ecosystem Based Assistance Decision Support	FAS/ICD
Robert Burris	OH	IM	Canada	01/17-01/18	234	Lake Erie Management Plan Subcommittee	NRCS/OH
William Hughey	PA	TA	Eritrea	02/05-03/01	5,640	Micro-dam Training	USAID
Alan Wood	PA	TA	Eritrea	02/05-03/01	5,692	Micro-dam Training	USAID
Gregory Card	OR	TA	Eritrea	02/05-03/01	6,822	Micro-dam Training	USAID
David Garen	OR	STE	Germany/UK	02/11-02/23	3,584	Hydrologic, Erosion, Water Quality, Climate Modeling	FAS/ICD
Donald Woodward	NHQ	STE	Germany/UK	02/11-02/23	3,362	Hydrologic, Erosion, Water Quality, Climate Modeling	FAS/ICD
Darrell Emmick	NY	STE	New Zealand	02/11-02/24	4,700	Intensive Grazing	NRCS/NHQ
Russel Kiefer	PA	STE	New Zealand	02/11-02/24	3,897	Intensive Grazing	NRCS/NHQ
Karen Hoffman	NY	STE	New Zealand	02/11-02/24	3,651	Intensive Grazing	NRCS/NHQ
Peter Smith	NHQ	IM	France	02/15-02/18	1,114	OECD Meeting, Environmental Benefits of Agriculture	NRCS/NHQ
Scott Peterson	LA	IM	Philippines	03/11-03/14	2,100	Species 2000 Workshop and Steering Committee Mtg.	EPA
Liu Chuang	NHQ	IM	France	03/11-03/15	3,210	Atlantic Economic Society Meeting	NRCS/NHQ
Fred Sulfian	PA	TA	Taiwan	03/11-03/22	5,900	Non-Point Source Water Mgmt. Issues	EPA
Thomas Iivari	NHQ	TA	Taiwan	03/11-03/22	5,850	Non-Point Source Water Mgmt. Issues	EPA
Hari Eswaran	NHQ	IM/TA	Brazil/Uruguay	03/17-04/06	1,818	Plant-Soil Interactions at Low pH/GIS Database Develop.	TROP/Soils

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP)

Question. The Farm Bill establishes a new program, the Environmental Quality Incentives Program, which combines the Agricultural Conservation Program, the Water Quality Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity control Program.

The authorization for this program provides the Secretary with a certain amount of discretion in implementing this program. What role do you see NRCS playing in the implementation of this program?

Answer. NRCS is the Department's lead agency on conservation programs. NRCS will be responsible for policy development, developing regulations, providing technical assistance, and program coordination. In setting policy for the conservation programs, NRCS will, nonetheless, also consult with the Farm Service Agency and other Department agencies, as appropriate. With respect to program delivery and concurrence procedures, NRCS will utilize State Technical Committees, Farm Service Agency state and county committees, and local soil and water conservation districts

Question. How much of the \$130 million authorized for this program for FY 1996 do you expect to utilize? When do you expect to promulgate the necessary regulations to implement this program?

Answer. We expect to use all of the \$130 million authorized for the program in FY 1996 to carryout the transition from ACP, GPCP, and CRBSCP to the new EQIP program. Proposed regulations are scheduled to be printed in the Federal Register before the first of July. Final regulations will be published by October 1.

Question. I notice that the President's budget does not propose funding for the Great Plains Conservation program for FY 97. Do you intend to use EQIP funding to continue this program or its activities under this new name?

Answer. The Federal Agricultural Improvement and Reform Act of 1996 (FAIR Act) repealed the Great Plains Conservation Program (GPCP). It did, however, provide for a 180 days transition period during which the Secretary is authorized to provide technical assistance, cost-share payments, and incentive payments under the terms and conditions of the GPCP to the extent the terms and conditions are consistent with the EQIP program.

After the 180 day transition period, EQIP will not be used to continue GPCP. The program will be terminated and no new contracts will be signed after October 1, 1996. However, existing contracts will continue to be administered through the life of the contract.

EMERGENCY WATERSHED PROTECTION

Mr. Johnson, I notice in your prepared testimony that you are requesting an increase of \$15 million for FY 97 to, "enable emergency work to begin immediately through the Emergency Watershed Protection Program without having to rely on supplemental appropriation funds, at least in the initial stages of the emergency."

Question. In the case of the floods in the Pacific Northwest, did you utilize regular program funds to begin assistance to those affected areas? If so, how much

was collected from each state? Do you intend to return these funds to the states in addition to the funds that are normally allocated?

Answer. The recovery in the Pacific Northwest was started with the last of the reserves in the FY 1994 appropriation of the Emergency Watershed Protection Program (EWP) and not from individual state commitments. These funds totaled less than \$900,000 and came from savings in contracts over the last three years. These funds were only sufficient to start the recovery and address several life threatening situations. The recovery in the mid-Atlantic states from the Blizzards of '96 was started by redirecting EWP nonexigency funds from Mississippi, Georgia, Louisiana, Virgin Islands, Florida, Iowa, and Missouri. About \$12 million was redirected to Maryland, New York, Pennsylvania, Virginia, and West Virginia. I intend to restore these funds from the proposed fiscal year 1996 Emergency Supplemental Appropriation.

The regular funds in the Emergency Watershed Protection Program are those appropriated each fiscal year by Congress to NRCS as part of the Watershed and Flood Prevention Operations. No regular funds have been appropriated since FY 1993.

Most of the funding for EWP work has come through emergency supplemental appropriations by Congress for specific disasters as they occur. The emergency supplemental appropriations for EWP was \$62 million in FY 1992, \$38 million in FY 1993, \$340 million in FY 1994, and \$80 million has been request for FY 1996.

Question. Why then, are you requesting that additional funds be appropriated, when you have been able to use regular program funds for this purpose?

Answer. My FY 1997 request for EWP funding is the regular program. It is the disaster specific supplementals that are additional. Historically, Congress appropriated \$10 to \$20 million for EWP each fiscal year which covered all but the extreme situations which have occurred in recent years.

Question. It is not true that this amount would not be adequate to satisfy the need in the case of a disaster of any magnitude?

Answer. We cannot precisely predict when or where disaster events will occur or how much damage will be inflicted. Annual obligations for damage have ranged from \$12.2 million in 1988 to about \$133 million in 1994, 1995, and 1996. Hopefully, the last three years, where we had the wind storms of the century, the floods of the century, and the fires of the century, are behind us and we will swing back to a lower average and my request reflects that expectation.

ASSISTANCE TO NATIVE AMERICANS

Question. Mr. Johnson, I note in your prepared statement that the NRCS anticipates receiving 150 requests to establish tribal land field offices each year. How many of these requests are you able to grant each year?

Answer. We have usually been able to satisfy all of the 150 requests. However, when it requires additional staff or program dollars, the request may have to be delayed until the following year.

Question. How many of these offices do you currently have?

Answer. NRCS has 14 full time and 28 part time offices at tribal headquarters, and we provide service to other Native American requests through the nearest existing field office. All of these offices provide or have access to the full array of NRCS technical assistance.

Question. What assistance do they provide that could not be provided by the local FSA office?

Answer. FSA could not provide any of the technical services NRCS provides as they have neither the authorizing legislation nor, in most cases, the specialized technical expertise to provide the service.

Question. How many of these requests are repeat requests from the same tribes, year after year?

Answer. These requests are new requests except for the few carry over requests which may require more than one year to accommodate.

CONSERVATION OPERATIONS

Question. For FY 96, the Committee included \$250,000, for continued support of agricultural development and resource conservation in Hawaiian areas serviced by the Molokai Agriculture Community Committee. What assistance does NRCS provide in this regard?

Answer. To date, 82 individual applications for technical and financial assistance have been received by the Molokai-Lanai Soil and Water Conservation District which administers the Molokai Agricultural Community (MAC) Projects. NRCS is responsible for providing direct technical assistance to these individuals in the development of required conservation plans and the design and installation of conservation practices. Sixty-four applications have been serviced and completed; eighteen are in various stages of completion; and approximately 100 more local producers have made inquiries of the program.

Question. Is funding for this activity included in the budget request for FY 97?

Answer. Yes it is. For fiscal year 1997, our request is for a funding level of \$250,000.

Question. For FY 96, the Committee included \$800,000 for planning of the Bayou Meto and Beouf/Tensas areas and continued work in the Kuhn Bayou project, all in Arkansas.

Please provide for the Committee an explanation of the work completed to date on these projects, and estimates of the funds needed, by fiscal year, to complete each of these projects.

Answer. In fiscal year 1996, funds of \$175,000 were used for Bayou Meto planning. The on-farm portion of the over-all wildlife and water conservation plan for this area will be completed this year. This portion of the plan will address ground and surface water needs for the entire project area, as well as on-farm water conservation needs. A preliminary plan for delivering additional surface water to the area through a basin wide delivery system will be completed in early 1997. An environmental

assessment, cultural resources assessment, fisheries inventory and water quality assessment will be completed this year for the water conservation portion of the project. The wildlife, fisheries and waterfowl enhancement component of the basin wide plan is scheduled for completion in 1997. The final plan of all planning components is scheduled for completion in March of 1998.

Funding needs for this project are \$600,000 for fiscal year 1997 and \$250,000 for fiscal year 1998. The project plan should be completed during 1998.

In fiscal year 1996, \$450,000 were used to implement the Eastern Arkansas Water Conservation Project. Progress continues to be made on implementing water conservation measures in the 26 county Eastern Arkansas Water Conservation Project area. Technical assistance has been provided that has resulted in installation of irrigation reservoirs, tailwater recovery systems and similar water conservation measures on farms. In fiscal year 1997, NRCS will provide technical assistance to the state of Arkansas in implementing the tax credit program by certifying that conservation practices meet standards and specifications. Continuation of the \$450,000 funding level is needed to continue progress.

For the Beouf/Tensas project, funds of \$175,000 were utilized by the NRCS in collecting on-farm conservation needs, land use data, and gathering soils information. Soils data is being digitized to create the primary data layer for the Geographical Information Systems for the entire project area. The base soils map for this 2,000,000 acre area is well on its way to completion. Much of the baseline data needed for this project area planning effort has been completed. A preliminary water budget and on-farm assessment has been completed.

In order to complete project objectives, additional funds are needed to accelerate the planning for this project. Full implementation is projected for fiscal years 1998 and 1999. Funding needs are \$200,000 in FY 1997, \$600,000 for FY 1998 and \$250,000 for FY 1999. Project planning completion is scheduled for FY 1999.

The plan for the Kuhn Bayou project--now called Point Remove Wetland Reclamation and Irrigation Project--was completed in FY 1995. A significant portion of the project design has been completed. The project is awaiting funding to carry out the implementation. Currently, the sponsors are unwilling to pay 50-50 cost sharing and NRCS does not administer any program that cost shares at 90-10 rate as the sponsors desire. The sponsors are looking for alternative funding to meet their 50 percent cost share requirement. If funded under Public Law 566 in FY 1997, NRCS would need about \$5,000,000 to complete the project implementation.

Question. For FY 96, \$400,000 was included for continuation of the pilot program to address erosion in the loess hills of Iowa. What is the status of this pilot project?

Answer. Local, state, and federal resources have been provided to the Loess Hills Development and Conservation Authority to protect threatened infrastructure and land through the construction of stream stabilization projects. The Authority makes these resources available to its 22 member counties through the Hungry Canyons Cost-Share Program. Since 1992, the program has provided the technical assistance and funds needed to plan and construct 9 stream stabilization projects in 8 counties in western Iowa.

In fiscal year 1996, Hungry Canyons Cost-Share Program will construct 12 stream stabilization projects in 7 counties. Funds for these projects will be provided

by the State of Iowa (\$400,000 or 36%), United States Department of Agriculture, NRCS (\$400,000 or 36%), and county governments (\$300,800 or 28%). These projects will protect 36 state and county bridges, hundreds of feet of utility lines and culverts, 150 acres of farmland, and avoid close to \$700,000 in traffic rerouting costs.

Question. When is it scheduled to be completed? How much will this project cost, by fiscal year, to complete?

Answer. If federal funding is met, the project would be completed by fiscal year 2007. Total estimated cost to complete is \$13 million. In terms of need for Federal funds to be used with matching state and local funds, \$1.3 million per year for the next ten years would be required

Question. Funding was included in the Conservation Operations account in the FY 96 appropriation for design and technical assistance in Franklin County, Mississippi. What is the status of this project?

Answer. NRCS provided \$250,000 for this project in fiscal year 1996. As of this date, all of the detailed design surveys have been completed and 80% of the geological investigations are completed. Design of the project will begin on May 10, 1996.

Question. What environmental and economic benefits will be realized upon completion of this project?

Answer. The United States Department of Agriculture Forest Service will support the project by developing request for proposals for a private investment venture and administering the permitting process. This will facilitate the opportunity for economic development. The development of this project will help local people help themselves. This project will also increase the opportunity for private sector business opportunities in the area. There will be an approximate increase of economic growth by an estimated \$2,600,000 to the region's economy on an annual basis. There will be an improvement in the water quality in the watershed by stopping sewage from entering the stream.

Question. For FY 96, \$250,000 was included to continue work on the Great Lakes Basin Program. What is the status of this project? Are there other federal agencies which contribute funding for this program? What agencies and how much?

Answer. NRCS provided \$250,000 for this project in fiscal year 1996. The Great Lakes Basin Program for Soil Erosion and Sediment Control is in its sixth year of operation. The Program fills a unique and previously unmet need to provide small grants to local grass roots organizations to address soil erosion and sedimentation problems. Through 1995, a total of 59 grants have been approved in the eight Great Lakes states for a total of \$3.7 million. In 1996, 20 projects were approved for a total of \$245,000. The program has leveraged \$1.47 million from other non-federal sources and has accounted for more than 439,000 tons of soil saved; 320 tons of phosphorus; and 340 tons of nitrogen. EPA has contributed to this program in the past, contributing a total of \$3.2 million between 1991 and 1993.

Question. What is the timetable to complete this project? What funding will be needed in each fiscal year to complete this project?

Answer. In 1987, a regional task force assembled by the Great Lakes Commission issued a report entitled "Soil Erosion and Sedimentation in the Great Lakes Basin". This report identified a need of \$110 million annually to address nonpoint source water quality problems in the basin. An initial request was targeted at \$25 million but has since been reduced to \$750,000 based on current federal budget constraints. Given the uncertainty of future funding levels, a definitive timetable for completion of program activities is not available. Funding needs for fiscal year 1997 are estimated to be \$750,000.

The Committee expressed its expectation that work continue on the Little Auglaize watershed in Ohio and the Piney Creek Watershed in Mississippi.

Question. What is the status of the work on these watersheds? What is the timetable for completion of these projects? What funding will be needed in each fiscal year to complete this project?

Answer. NRCS intends to continue work on the Little Auglaize Watershed Project in Ohio and the Piney Creek Watershed Project in Mississippi. In 1996, NRCS provided \$100,000 for the Little Auglaize watershed project and \$180,000 for Piney Creek.

The Little Auglaize Project is authorized under the Watershed Protection and Flood Control Act (PL-566) for flood control. The project is 92 percent complete with about 160 miles of channel improvement installed and about 16 miles remaining. The cost to complete the project is \$2.03 million. The initial allocation to Ohio will depend on the PL-566 allocation and the overall priorities and within Ohio in 1997.

The Piney Creek Project is a subwatershed of the Yazoo Watershed authorized under the Flood Control Act of 1944 (PL-534). Two of the seven Major Grade Stabilization Structures have been completed. Most of the 115 Pipe Drops remain to be constructed. Total remaining needs of \$10.3 million will be needed to complete the project.

WATERSHED AND FLOOD PREVENTION OPERATIONS

Question. Please provide a summary of the situation in the Devil's Lake basin, the actions that NRCS has taken to address this situation, and the funding included in the FY 97 request to address this problem.

Answer. The flooding situation in the Devil's Lake Basin of North Dakota is continuing and is still serious. Above average precipitation is keeping the closed basin lake at damaging levels and farming activities are still disrupted to some degree.

NRCS continues to assist the State of North Dakota with sign ups for the Devil's Lake Emergency Response Plan for upper basin water retention. Over 100 applications have been received despite concern over restored or created wetlands and what will happen when the contracts expire. NRCS, COE, EPA, and FWS have signed a joint memorandum to address this issue.

NRCS has allocated \$200,000 for Emergency Wetlands Reserve Program (EWRP) contracts in North Dakota that can serve as a demonstration of what could be done in Devil's Lake.

Recently, NRCS made available all the remaining uncommitted Water Bank funds, \$857,000 to North Dakota, to address the Devil's Lake situation. With the limited funds, only about 35 of the 160 applications could be accepted.

NRCS assisted the Governor's staff in conducting 3 forums in the state to develop sub-basin watershed management plans. Congressional staff and the State Water Commission also participated in these forums to develop consensus solutions and total resource management plans.

No special funds are targeted to Devil's Lake Basin in FY 1997, but all existing programs, including new authorities in the 1996 Farm Bill and flood plain easements in the EWP will be available.

The Committee expressed its expectation that work continue on the Yazoo basin demonstration erosion control project and the Little Sioux and Mosquito Creek watersheds in Iowa.

Question. What is the status of the work on these projects? What is the timetable for completion of these projects? What funding will be needed in each fiscal year to complete each project?

Answer. NRCS is continuing both technical and financial support for progress on the Yazoo demonstration erosion control project in Mississippi and the Little Sioux and Mosquito Creek watershed projects in Iowa.

The Yazoo demonstration erosion control project is a joint effort with NRCS, ARS, and the Corps of Engineers (COE). Started in 1985, erosion control projects are identified through FY 2000. The NRCS authority is the Flood Control Act of 1944 (PL-534), but the rate of installation is dependent on both USDA and DOD appropriations.

Through FY 1996, the COE has completed eight projects and NRCS six. Continued funding levels by the COE is uncertain. NRCS proposes four projects in FY 1997 requiring about \$5.0 million, five in FY 1998 for \$3.6 million, five in FY 1999 for \$3.2, and six projects in FY 2000 requiring \$2.3 million. Each years projects include structures as well as land treatment measures.

The Little Sioux Watershed is one of the 11 large watersheds authorized under the Flood Control Act of 1944 by PL-534. This massive project to restore the 4,500 square miles of badly eroded land in the Little Sioux River Watershed is over two-thirds completed. To date, over 46,000,000 feet of terraces, 12,000 acres of waterways, 615,000 acres of contouring and 680 erosion control structures have been installed as the principal land treatment measures.

Structural measures installed include nearly 1,200 Grade Stabilization Structures, over 70 miles of channel improvement, and 16 miles of floodways. Federal obligations up to 1995 are about \$68 million.

The remaining 133 grade stabilization structures could be installed by 2016 with an annual cost of \$750,000 and the remaining land treatment could be applied by 2041 at an annual Federal cost of \$1,400,000.

The Mosquito Creek Watershed is authorized under the Watershed Protection and Flood Control Act PL-566. The project is over 80% complete and the remaining ten structures will cost \$1,400,000. The installation schedule calls for \$600,000 in FY 1997, \$450,000 in FY 1998, and \$450,000 in FY 1999.

The Committee included \$300,000 for the Zuni River Watershed in this account.

Question. What is the status of work on this project? What is the timetable for completion of the project? What funding will be needed in each fiscal year to complete this project?

Answer. All of the technical field work will be completed by July of this year, and the first draft of the technical reports should be ready for review by September 1996. The schedule calls for the first draft of the general report to be ready for review by January 1, 1997, and the final plan submitted to Congress by September 1997.

Funding needs for FY 1997 are estimated to be \$600,000.

WHOLE FARM PLANS

Question. I understand that USDA currently has Whole Farm Plan pilot programs in six states (Georgia, Idaho, Minnesota, Nebraska, New York, Pennsylvania). Many farmers and farm groups are very concerned that important conservation programs such as the Environmental Quality Incentive Program (EQIP) and the Conservation Farm Option (CFO) program contained in the recently passed farm bill, will be used by the Department to create a nationwide Whole Farm Planning process. Many farmers and farm organizations strongly oppose whole farm plans fearing it is another step toward permitted agriculture, new community-right-to know laws for farmers and livestock producers, and even more unnecessary government red tape. What is the cost of the Whole Farm Plan pilot program?

Answer. The total cost for the six pilot projects for fiscal years 1995 and 1996 was \$450,000. NRCS does not plan to continue these pilot projects in fiscal year 1997.

In December of 1995, NRCS provided a letter to all interested parties clarifying the meaning of a voluntary producer initiated conservation planning concept we had previously termed "Whole Farm and Ranch Conservation Planning." Prior to the letter, there had been some confusion as to what the term "Whole Farm and Ranch Conservation Planning" meant. Some groups had concerns about the term. NRCS decided to include the concept of "Whole Farm and Ranch Conservation Planning" within its regular conservation planning process. For these reasons, NRCS amended its conservation planning action register, and changed the goals of the six state (GA, ID, MN, NE, NY, and PA) conservation planning pilot efforts. NRCS requested the pilots to complete their projects by the end of 1996. Each state is to provide a summary of its activities, and their observations of the strengths and weaknesses of the planning concept. Results from these projects will be shared at the end of the 1996 with all interested parties.

Question. Does NRCS intend to make Whole Farm Plan programs out of EQIP or CFO?

Answer. NRCS does not intend to make these programs "Whole Farm Plan" programs. These are voluntary conservation programs initiated by the producer. USDA and others, as requested by the producer, will assist in the development of a conservation plan for their land.

The new Farm Bill does direct USDA to eliminate the need for multi-plans and, to the extent practical, combine all of USDA plans (Compliance, CRP, EQIP, CFO, and others) into "One Plan." We recognize that our existing conservation

planning policy allows us, as requested by farmers and ranchers, to do a "One Plan" conservation plan and we intend to comply with this request as feasible.

GREENHOUSE GASES

American agriculture is often unjustly criticized that is a "major" contributor of so-called green house gases and the global warming effect. It is my understanding that USDA officials have joined in this one sided debate in the White House Conference on Global Warming and other similar meetings around the world.

Yet, the tens of millions of acres of cotton, corn, wheat, trees and other vital agricultural crops all take in CO₂, a major green house gas, and give off oxygen.

Question. What is the NRCS's position on agriculture's contributions toward reducing greenhouse gases? Is there documentation of these contributions?

Answer. NRCS recognizes that agriculture contributes to the emission of gases that are identified with global climate warming. These are primarily related to the use of nitrogen fertilizers for crop production, the production of animals, and the storage and utilization of animal manures.

Beginning in fiscal year 1995, NRCS implemented a number of projects to address the issue and to work toward production and management systems that would reduce agriculture's contribution to the problem. These are all documented and projects that are continuing in fiscal year 1996. They include: Nitrogen Fertilizer Use Efficiency which is designed to reduce volatilization of nitrogen fertilizer gases into the atmosphere. It involves several initiatives that include substitution of naturally produced nitrogen fixed by legumes for commercial nitrogen fertilizers for crop production, and improvements in the technologies that measure plant and soil nitrogen levels. In fiscal year 1996, 14 projects are active in 16 states and Puerto Rico; AgStar, which is a cooperative project between NRCS and the US Environmental Protection Agency (EPA). AgStar technology allows methane capture from animal waste (manure) storage facilitates that would otherwise be release into the atmosphere and contribute to green house gases. AgStar presently has ongoing demonstration projects with 60 confined animal feeding producers in 13 states; Improved Ruminant Productivity and Product Marketing. Animals contribute to green house production by producing gases that are released directly into the atmosphere. This is another joint project with EPA and is active in the Southeastern part of the US. The project involves demonstrating improved production techniques that include improvements in calf crops, increases in daily rate of gain, and animal health. Activities also include research at three universities to identify the best mix of livestock practices that will result in the lowest rate of methane emission per unit of production.

Question. What is the annual expenditure that NRCS makes on Green House Gases? Under what authorization?

Answer. For fiscal year 1996, NRCS allocated \$2.7 million from its operating budget for the projects described above. Individual allocations were \$734,000 for nitrogen fertilizer use efficiency, \$1 million for AgStar, and \$950,000 for improved Ruminant productivity and product marketing.

All dollars allocated to these projects were made under the authority of the Conservation Operations program.

QUESTIONS SUBMITTED BY SENATOR GORTON

TECHNICAL ASSISTANCE IN THE PACIFIC NORTHWEST

Question. In your statement you mention a meeting you had with a delegation of wheat growers from the Pacific Northwest, in which they conveyed to you the need for "technical assistance" from the NRCS. Will you elaborate on this visit. What specific areas of "technical assistance" did they inform you were important to maintain in the Pacific Northwest?

What programs in your department, based on these types of visit with farmers and ranchers, do you see a need to increase funding?

Answer. In March of this year, I met with a delegation of wheat growers from the Pacific Northwest to discuss conservation issues. A major concern of the delegation was the amount of time NRCS field personnel were spending on administrative related activities. In addition, concern was expressed about the reluctance of producers to request NRCS assistance because of the fear of being called out of compliance relative to the conservation provisions of the 1985 Food Security Act. We also discussed opportunities for producers to maintain records of crop residue levels for use in estimating soil erosion. The two latter items have been addressed in the 1996 Farm Bill.

Specific areas of technical assistance requested were related to: (1) revision of existing conservation plans; (2) application of conservation systems; (3) training on how to measure crop residue levels; and (4) helping evaluate new soil erosion control techniques developed through on-farm research.

The assistance requested by the farmers and ranchers is delivered through staff supported by the Conservation Technical Assistance program.

RESOURCE CONSERVATION AND DEVELOPMENT

On March 26, 1996, I asked Under Secretary Rominger to look into a situation in Wahkiakum County regarding RC&D.

I have been contacted by the Wahkiakum County Conservation District in Cathlamet, Washington. According to Kimberly Smith, Program Coordinator, the Farm Service Agency has informed them that projected funding for the Wahkiakum County has been reduced by 90%. Can you please look into this inquiry and if true, explain the reasons why this specific Conservation District was reduced by 90%.

Answer. The only direct knowledge we have for Conservation Districts is about the Natural Resources Conservation Service which has not reduced funding by 90% in any Conservation District. However, the Farm Service Agency has indicated that the Agriculture Conservation Program (ACP) funding for the Wahkiakum County Conservation District has been reduced in each of the last two years for an overall reduction of approximately 80%. The funding for each district is based on several factors which include total funds appropriated and status of work in the district. The ACP appropriation has been reduced from \$195 million in 1994 to \$75 million in 1996, and we presume a major portion of this reduction is based on the appropriated ACP funds that are available to the Farm Service Agency.

Question. It is noted in the NRCS explanatory statement that there are currently 277 authorized RC&D areas involving 2,016 counties across the country.

Please outline for me the authorized RC&D areas in my state, including the county they are located in. What specific RC&D projects are currently undergoing in Washington State?

Answer. There are four authorized RC&D areas in Washington State and one area applying for authorization. We will provide a listing of the four authorized areas in the State of Washington for the record.

[The information follows:]

AUTHORIZED RC&D AREAS IN WASHINGTON STATE

Columbia-Pacific RC&D, Aberdeen, WA.: Serves Mason, Pacific, Grays Harbor, and Wahkiakum counties.

Projects include:

Watershed Restoration

Salmon Habitat Restoration

Erosion Control

Cattle Exclusion (fencing)

Agro-Forestry Cooperative/RainKist. Formation of a new community owned business that harvests, manages, manufactures and markets value-added specialty forestry products.

Special Forestry Products Training Program. One-year certificate course offered through Grace Harbour College & the RC&D to train disadvantaged community members and other entrepreneurs in sustainable techniques of managing forests and manufacturing value-added forestry products.

Hy-bred Poplar. Project to help farmers grow hy-bred poplar as an alternative cash crop and promising fiber and wood supply for local mills.

Recreational Projects

Ki-Yak RC&D Council, Yakima, WA: Serves Kittitas and Yakima counties and the Yakima Indian Nation.

Projects include:

Lower Valley Dairy Project II

Upper Kittitas County Restore Project (associated with the American Disability Act)

Kittitas Conservation District Soil Erosion caused by irrigation project

Educational Services Division 105 Project. Effort to instruct students and teachers in natural resource issues.

Limited Resource Farmer Outreach Project

"Big Loops" Archeological Site Project on the Yakima Indian Nation

Water Quality Information Coordination for the Yakima River Basin Project

Poplar Tree Plantings and Riparian Rehabilitation Project

The Value of Water to the Yakima River Basin Economies Project. Joint effort between the Tri-County Water Resources Agency (Yakima, Kittitas and Benton Counties) and the RC&D to establish the economic importance of water to all elements of the economies in the Yakima River Basin.

Participation in the Conservation Advisory Group (CAG) involved with the Yakima River Enhancement Bill

North-Central Washington RC&D, Chelan, WA: Serves Chelan, Douglas, and Okanogan counties.

Projects include:

- Tri-County Seed Bank. Effort to provide a consistent supply of site specific seedlings, ponderosa pine or douglas fir, for the three county area. The intent is for reforestation purposes following fire or logging.
- Urban Forestry Conference. A workshop to inform public about the benefits of trees in an urban environment.
- Third Annual Water Conference. Conference to discuss major water issues in the area concentrating on what the local conservation districts are doing with in the watershed.
- Methow Valley Irrigation District Rehabilitation Project. Pilot planning project to improve water quality and quantity by converting water delivery from open ditches to buried pipelines.

Upper Columbia RC&D Council, Spokane, WA: Serves Spokane, Whitman, Stevens, Ferry, and Pend Oreille counties.

Projects include:

- Upper Columbia Basin Water Resources Workshop
- Renew America, Environmentally Sustainable Communities
- Pacific Rim Regional RC&D Meeting
- Future Jobs Workshops, Pend Oreille Valley New Career Opportunities
- Reforestation Plantings, Carbon Offset Program (COP)
- 1996 Seedling Production, over 1/2 million seedlings produced by the RC&D
- Kellogg Super Fund site assistance, provided 100,000 seedlings for hill side revegetation
- Assisted Blue Mountain Counties in NE Oregon to set up their own COP

Program

- Fairchild Air Force Base Assistance, 100 acre reforestation project and wildlife area enhancement
- Memorandum of Understanding (MOU) with North Central Washington RC&D for seed bank assistance, COP cost share, trees & planting
- MOUs with RC&Ds in Washington, Idaho and Montana for COP assistance in the three state area
- Assisted National Association of RC&Ds on reorganization and funding proposals
- Arbor Day, 1996, included program at Fairchild with 400 students, base commander and George Nethercutt; provided 5,000 seedlings to 20+ schools, scouts and others
- Assisted in setting up Elokia Lake Management District, the 1st LMD in Eastern Washington
- Coordinator to set up "Don Samuelson" Low-Impact Camping Projects. This project seeds funding to provide camping, backpacking and river floating equipment to loan to Future Farmers of America (FFA) and 4-H Clubs to recruit new members and explain stewardship to non-FFA and 4-H students.

**CONSERVATION RESERVE PROGRAM AND
WETLAND RESERVE PROGRAM ACRES**

Question. How many acres, per county, in my State are currently enrolled in the CRP and WRP?

Answer. Twenty Counties in the State of Washington currently have 1,047,029 acres enrolled in the CRP. The acreage varies from a low of 198.2 acres in Pend Ore County to a high of 215,633.9 acres in Adams County. We will provide tables for the record showing the acres that are currently enrolled by county for the State of Washington.

[The tables follow:]

**Conservation Reserve Program Acres Enrolled
Washington State**

County	Acres
Adams.....	215,633.9
Asotin.....	23,917.7
Benton.....	41,390.2
Chelan.....	305.5
Columbia.....	22,666.7
Douglas.....	154,258.0
Ferry.....	1,975.4
Franklin.....	82,079.8
Garfield.....	16,080.5
Grant.....	73,122.4
Kittitas.....	2,090.3
Klickitat.....	46,829.9
Lincoln.....	105,045.3
Okanoga.....	19,269.5
Pend Ore.....	198.2
Spokane.....	42,569.3
Stevens.....	5,882.1
Wallaw.....	114,083.3
Whitman.....	46,876.0
Yakima.....	32,754.7
Total.....	1,047,028.7

**Wetland Reserve Program Acres Enrolled
Washington State**

County	Acres
Mason.....	25
Pend Oreille.....	490
Okanogen.....	54
Franklin.....	430
Snohomish.....	275
Stevens.....	1,228
Benton.....	312
Grays Harbor.....	24
Kitsap.....	74
Pierce.....	52
Whitman.....	291
Skagit.....	110
San Juan.....	13
Total.....	3,378

Question. Do you anticipate an increase or a decrease in my State due to the recently signed Farm Bill?

Answer. We anticipate a likely increase in CRP acreage in the State of Washington as well as all other States as a result of the 1996 Farm Bill since new sign-ups are now authorized. Many of the calls that we have received are inquiring about CRP contract extensions.

The recently signed Farm Bill will not specifically impact the ability of Washington to compete in the WRP selection effort. Because the new statute does place a cap on the total program acreage at 975,000 acres whereas the previous program had only requirement that not less than 975,000 acres be enrolled will eventually impact the amount of WRP acres in all states.

FORESTRY INCENTIVES PROGRAM

Question. What has been done in my state of Washington with respect to the Forestry Incentives Program (FIP)?

Answer. USDA's Forestry Incentives Program (FIP) supports good forest management practices on privately owned, non-industrial forestlands. FIP is designed to meet future demands for wood products, while benefiting the environment. FIP is available in all counties designated by a Forest Service survey of eligible private timber acreages.

FIP is administered by the Natural Resources Conservation Service (NRCS) and provides up to 65% cost-sharing for the tree planting practices. FIP activity in Washington State is listed in the following tables:

**CUMULATIVE SUMMARY OF FIP FROM 1975 THROUGH 1995
WASHINGTON STATE**

PRACTICE	PARTICIPANTS	ACRES	COST SHARES	AVERAGE COST SHARE\AC
Tree Planting (FP1)	1,263	46,700	\$5,353,721	\$114.64
Improving Stand of Trees (FP2)	246	12,240	343,259	28.04
Site Preparation for Natural Regeneration (FP3)	1	20	2,802	140.10
Total	1,477	58,960	\$5,699,782	

NOTE: All participant State totals are net totals and may not add correctly. The actual number of participants is less since one person may have participated in more than one year.

SUMMARY OF 1995 FIP ACTIVITY - WASHINGTON STATE

PRACTICE	PARTICIPANTS	ACRES	COST SHARES	AVERAGE COST SHARE\AC
Tree Planting (FP1)	78	2,155	\$268,637	\$124.66
Improving Stand of Trees (FP2)	4	115	8,965	77.96
Site Preparation for Natural Regeneration (FP3)	0	0	0	0
Total	82	2,270	*\$277,602	

* Cost-share payments made in FY 1995, may have been approved in prior FYs.

Washington State received \$174,000 from the national FIP appropriation of \$6,625,000 in fiscal year 1995. Washington State received \$150,000 from the national FIP appropriation of \$6,325,000 in fiscal year 1996. Ten percent of the national appropriation is transferred to the Forest Service annually for technical assistance on the FIP.

EMERGENCY WATERSHED PROTECTION

Question. As you know, the Pacific Northwest suffered severe flooding in January and February. In what ways has the Emergency Watershed Protection (EWP) program been helpful to the affected areas in the PNW?

Answer. The January and February rains and runoff caused near record flooding in Oregon, Washington, Idaho, and Montana. The NRCS initiated immediate damage surveys in all affected areas and when the Presidential Disaster

Declaration was made, coordinated all efforts through the Governors' office and FEMA.

Initial damage estimates eligible for Emergency Watershed Protection Program funding were \$34 million in Oregon, \$3.8 million in Washington, \$5.0 million in Idaho, and \$600,000 in Montana. These estimates were used in estimating the needs for the emergency supplemental appropriations along with other known needs in the rest of the country. I intend to have initial funding to the states by mid-May. Some high priority life threatening work has already been accomplished by deferring work that had not been undertaken in other disaster areas.

FARM BILL BUDGET BUDGET REQUESTS

Question. What specific areas within your budget have you asked for an increase -- due to the recently signed Farm Bill.

Answer. When the fiscal year 1997 budget for the Natural Resources Conservation Service was submitted, there were no requested increases based on the new Farm Bill because final action had not been taken. However, with the bill signed into law April 4, 1996, we are working with OMB to assess budgetary impacts possible on FY 1997 expenditures.

ENVIRONMENTAL QUALITY INCENTIVE PROGRAM (EQIP)

Question. What department(s) within USDA will be administering the Environmental Quality Incentive Program (EQIP), a new entitlement program created in the 1996 Farm Bill? How will your department be working with the other departments to implement this new mandatory program? Do you feel that the NRCS has the capability to implement this program by itself, or rather should responsibilities be split between say, the Farm Service Agency (FSA) and the NRCS?

Answer. NRCS as the Department's lead agency on most conservation programs, will be responsible for policy development, developing regulations, allocation and obligation of funds, contract approval, providing technical assistance, and program coordination. In setting policy for the conservation programs, NRCS will, nonetheless, also consult with other Department agencies, as appropriate. With respect to program delivery, NRCS will utilize State Technical Committees and Soil and Water Conservation Districts, Farm Service Agency state and county committees, and the assistance of the Farm Service Agency as appropriate.

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

PLANT MATERIALS CENTERS

As a result of the strong support of this Subcommittee, there is a tremendous cooperative effort between the NRCS plant materials program and the Louisiana State University Rice Research Station in Crawly, La, in developing innovative research to restore our fragile and declining coastal wetlands and surrounding ecosystems. Results of this resource pooling have been cutting-edge biotechnology with the recent development of "artificial seed" production for smooth cordgrass and genetic engineering of other wetland plants. With full development and testing of this new technology, it is estimated that the cost of the standard labor intensive practice of planting shorelines could be reduced by 20% or more from \$4000 per 100 feet of

shore planted. Also, with successful testing of aerial application of hundreds of acres could be planted at a fraction of the cost as compared to the small areas now hand planted over the course of several months. Further once fully developed, this technology could be of great benefit to not only the eroding shorelines and marshes of coastal Louisiana, but also the Great Lakes, the Florida Everglades, and the Chesapeake Bay.

Question. The state of Louisiana has aggressively promoted a pro-active consortium of Federal, state, and university commitment to solving its wetland resource problems. The Golden Meadow Plant Materials Center is the only center in the United States dedicated to coastal wetland plant development. How do you provide the Center with the resources it needs to complete its mission?

Answer. Each plant materials center serves a geographic area with unique natural resources conditions that are based on climate, altitude, weather, soil types and other conditions. The natural resource needs addressed by the Golden Meadow Center are considered in relation to that of other centers with respect to staffing, operational costs, facility and equipment needs, and work that is ongoing and/or projected. The Natural Resources Conservation Service National Plant Materials Specialist makes specific budget allocation recommendations to the Regional Conservationist based upon the evaluation of existing priorities, center accomplishments, and available resources. The Regional Conservationist, in turn, makes specific allocations to individual states within the region, and the State Conservationist subsequently provides funds to the Center according to resources that are received.

As a rule, the annual cost of developing plant materials to address all the natural resource problems for the areas served by the centers greatly exceed the resources that are available. As a result, it is only possible to undertake high-priority studies that have greatest potential to solve the most critical conservation problems. Some worthy projects are deferred for this reason and may never be undertaken. This situation exists at all centers and the consequence is that some ongoing work is extended over a longer period than if the budget was not constrained.

Question. Given the urgency of the Nation's wetland loss problem, particularly coastal Louisiana, does NRCS support accelerating this effort? If so, I am not aware of any funding in the FY 1997 budget to do so. Does NRCS support accelerating this effort and what level of funding would be needed in FY 1997 to do so?

Answer. The agency would support accelerating any important effort if it could be accomplished without jeopardizing other high priority needs. Budgetary constraints make it difficult to significantly increase efforts on any single high-priority issue in this and other important Federal programs. Our approach has been to continue to work to the extent practical on each extremely important issue.

There are currently no special funds provided in the fiscal year 1997 budget for supporting high priority plant materials needs on an accelerated basis and it is unlikely that the pace of progress can be stepped up very much. However, NRCS is very aware of wetland loss problems and has made it a high priority to address the problem. Examples of additional efforts undertaken in recent years to reduce wetland loss include establishment of a Wetlands Institute, undertaking additional wetlands

work at several Plant Materials Centers, and specializing in coastal wetland work at Golden Meadow Center.

It would cost an estimated \$12.8 million to address all high priority needs like wetland loss. This cost should be regarded as a long-term investment in providing plant technology to solve critical conservation problems. There is no short-term answer that is quick and easy, since we are dealing with biological systems with complex interrelationships.

Question. Within the area of applied technology, what is the current ability of your agency to accelerate the advanced testing of existing and newly developing biotechnology and release it quickly into the hands of the public?

Answer. The mission of NRCS' Plant Materials Centers Program is to develop and transfer new technology on plants in order to meet critical resource conservation needs. This effort focuses most strongly on application oriented efforts that can be put to immediate use by the public. Typical products include new plant releases and technical information on management practices.

Past traditions of NRCS and its Plant Materials Centers Program lend themselves well to accelerating testing of biotechnology materials in order to get them into the hands of the public more quickly. Several factors bear upon this, namely; infrastructure of contacts between field offices and private sector users, ability of plant centers to perform field oriented evaluations, existing interactions between plant centers and scientists doing biotechnology work, and experience in doing applied plant science that is of considerable interest to end users and can be put to immediate use.

Although the knowledge, experience, and ability of NRCS is well suited to accelerate application biotechnology, one of the limiting factors is budgetary constraints on Federal programs necessary to balance the budget. Within current funding levels, there would need to be some redirection of program emphasis, presumably at the expense of other high priority efforts. It is a factor that needs close consideration.

Question. As a result of the tremendous technological break through recently experienced at Golden Meadow, do you feel that NRCS should be working cooperatively with other Federal agencies and departments that have similar jurisdiction and would mutually benefit from this technology? If so, what agencies should be involved? If other funding were made available through such agencies, how would you use it to ensure this new technology is carried to the next phase of applied techniques?

Answer. Development of new technology should and is being shared cooperatively at any time that it is well suited to land management applications and conservation of natural resources. This has been done at Golden Meadow as well as other NRCS plant centers. Currently, there are several cooperative arrangements with Plant Materials Centers and other Federal agencies. These include: National Park Service; Forest Service; Agricultural Research Service; and Department of Defense. It would seem that any Federal agency or department with responsibility for land management would benefit from expertise available at our Plant Materials Centers.

The primary focus of cooperative arrangements with other agencies and departments has been in the area with native plant species. Our centers have been

called upon to provide knowledge and/or materials that meet needs to restore and revegetate disturbed land.

If funding were made available through other agencies, the same sort of arrangement could probably be maintained. Two caveats apply, our facilities and staff must be sufficient to undertake the work while still handling existing NRCS priorities, and, work from other agencies would need to be reasonably consistent with our mission of developing and transferring applied plant technology. To date, these qualifications have not presented problems, but obviously there are limits within which we must function. Each cooperative effort, therefore, would need to be handled on a case-by-case basis.

QUESTIONS SUBMITTED BY SENATOR BYRD

FLOOD PREVENTION STRATEGIES

Recent flooding in many states, including West Virginia, again point to the need for watershed strategies that will reduce the risk of recurring flood events. For example, some of the watersheds that received severe damage from the January 1996 floods were also victims of similar flood events over the last 10 or 15 years.

Question. Is the Natural Resources Conservation Service (NRCS) working with other federal, state, and local agencies to address the problem of recurring floods that might be prevented because of remedial actions in those watersheds?

Answer. NRCS carries out floodplain management studies under Section 6 of Public Law 83-566. These are special studies that coordinate the reduction of flood losses while protecting natural and beneficial values and functions of the floodplain. NRCS cooperates with State floodplain management offices to develop priorities for floodplain studies and encourages the use of nonstructural measures to reduce flood damages. Other types of special studies may also be undertaken such as joint studies with the Corps of Engineers and other Federal agencies. Cost effective alternatives considered during floodplain management studies may include flood proofing, flood warning, flood audits, structural measures, acquisition of flooded properties, zoning, and storm water management.

NRCS is looking at utilization of a watershed approach in addressing all natural resource concerns and problems. A team approach is being used to address concerns identified by the local people. We have been in contact with agencies such as USGS, Corps of Engineers, EPA, and FWS to coordinate these efforts. These efforts are all being coordinated with local organizations through the National Association of State Soil Conservation Agencies, National Association of Conservation Districts, Local Conservation Districts, and others.

Through the watershed approach, we would look at all aspects of the watershed, one of which could be recurring floods, and would utilize all tools and resources available from Federal, State, and local sources.

Question. Is NRCS willing to take the leadership role in working with other agencies and communities to develop and implement these strategies?

Answer. We are willing to continue to work with Federal, State, and local agencies and communities to develop appropriate strategies and ensure a long-term,

nationwide approach to watershed management. The responsibility and accountability for watershed management must be shared at all levels of government. Further, the solution to these problems and concerns will require the efforts and resources from all levels of government and must include input from local communities and organizations.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP)

I have heard from many West Virginia small family farmers in support of the Environmental Quality Incentive Program (EQIP). Rather than large confined livestock operations, West Virginia's climate and terrain lends itself to smaller, more intensive confined operations.

Question. How do you envision EQIP benefiting these producers?

Answer. Livestock producers in West Virginia can utilize the program, if they are in a priority area, to assist them in solving water, soil and related natural resource problems. EQIP will provide technical assistance, cost-share payments and incentive payments to producers on agricultural lands in priority areas to solve these problems. Cost-share and incentive payments, up to a limit of \$10,000 to any person annually and \$50,000 for the life of the contract, will be available. Producers may enter into 5- to 10-year contracts, depending on the needed conservation practices which are specified in the producer's conservation plan. The new Farm Bill also requires that one-half of the available funds be used for conservation activities related to livestock production.

SUBCOMMITTEE RECESS

Senator COCHRAN. This concludes today's hearing. I appreciate very much the cooperation from all of our witnesses.

Our next hearing will be on Tuesday, April 23 at 10 a.m. in this room, SD-138 of the Dirksen Senate Office Building. We will review at that time the budget request submitted by the Department for farm and foreign agricultural services. Until then, the subcommittee stands in recess.

[Whereupon, at 11:29 a.m., Thursday, April 18, the subcommittee was recessed, to reconvene at 10:15 a.m., Tuesday, April 23.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

TUESDAY, APRIL 23, 1996

**U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.**

The subcommittee met at 10:15 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Burns, Bumpers, Kerrey, and Kohl.

DEPARTMENT OF AGRICULTURE

STATEMENT OF EUGENE MOOS, UNDER SECRETARY, FARM AND FOREIGN AGRICULTURAL SERVICES

ACCOMPANIED BY:

**DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND
PROGRAM ANALYSIS, DEPARTMENT OF AGRICULTURE**

KENNETH ACKERMAN, DEPUTY ADMINISTRATOR, RISK MANAGEMENT

FARM SERVICE AGENCY

STATEMENT OF GRANT B. BUNTROCK, ADMINISTRATOR

ACCOMPANIED BY DAVID C. HALL, DIRECTOR, BUDGET DIVISION

FOREIGN AGRICULTURAL SERVICE

STATEMENT OF AUGUST SCHUMACHER, ADMINISTRATOR

OPENING REMARKS

Senator COCHRAN. The meeting of the subcommittee will please come to order.

Today we are continuing our hearings on the budget request of the administration for fiscal year 1997 for agriculture, rural development, and related agencies.

This morning, we are specifically reviewing the budget requests of the Farm and Foreign Agricultural Services. Our witnesses are led by Under Secretary for Farm and Foreign Agricultural Services, Eugene Moos. There are others who have accompanied him today, including Grant Buntrock, August Schumacher, David Hall, and Dennis Kaplan.

If there are others, Mr. Secretary, who should be introduced, I will ask you to do that when you present your comments to the subcommittee.

We have a copy of your written testimony, which we appreciate very much. We will make that a part of the record in full. I would invite you to proceed to summarize your written testimony as you like, and make any additional comments or remarks that you deem appropriate. Then we will have an opportunity to discuss the issues that are raised in your testimony.

I am delighted that we are joined this morning by the distinguished Senator from Nebraska. Senator, if you have any comments or opening statement you would like to make, you are recognized for that purpose.

Senator KERREY. I appreciate it, Mr. Chairman. I have no opening statement. I look forward to the witnesses' comments.

PREPARED STATEMENT

Senator COCHRAN. Thank you very much. I have a statement from Senator Burns which will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BURNS

Thank you, Mr. Chairman, for calling this hearing today. I would also like to welcome the members of the panel who represent both the Foreign Agricultural Service and the Farm Service Agency as they report on their budget request for fiscal year 1997.

With the passage, and signing by President Clinton, of the Federal Agriculture Improvement and Reform Act of 1996, we are moving into a new era in American agricultural policy. The new American farm policy will place our producers in the market of the world. This will provide our producers in the position of reaching toward the fulfillment of the American dream by allowing the hard working men and women on the family farm to work for themselves and not for Washington.

With the changes in the commodity programs the Farm Service Agency will have its hands full in the coming days, making sure that all producers have an understanding of where they stand on program enrollment and opportunities. Their work has just started, and I am eager to hear what they have planned in order to meet the needs of those outside the Washington beltway.

Gone are the days when the producer can bring grain to their local elevator and feel that their job is completed. The new workplace for all America has come to the family farm and ranch throughout the land. As we move into the future, our producers must be prepared to work the market to their advantage. Their task is only beginning when they take their grain to the elevator. They need to be prepared to market and solicit the movement of their crops from the field to the marketplace shelf. It should be the goal of government to assist producers with the marketing of these commodities.

This function begins with the Farm Service Agency, but it definitely does not stop there. The Foreign Agricultural Service (FAS) has its share of responsibility in this matter. The future of American agriculture lies in the development of American trade. It was with this in mind that last year I introduced a bill to create a line item in the FAS budget for the Foreign Market Development Cooperators Program. I was very glad to see that this was accepted as an amendment to the final version of the Farm Bill. I am very interested in hearing how the Department and FAS are preparing to implement this program for the benefit of our Nation's agriculture producers.

The Cooperators Program is one which can tell the story of success in the area of foreign trade. The program offers opportunities where the producer, through their nonprofit commodity organizations, joins with the government to split the cost of developing and maintaining markets in countries around the world. This places additional emphasis on producers watching the expenditure of funds from both their own pocketbooks and federal treasury.

Mr. Chairman, the future is before our agriculture producers and they are up for it and ready to take advantage. It is the duty of the agencies before the committee today to assist the farmers in America to meet the changes before our producers. It is their obligation to phase themselves into the new American workplace. They will take this new farm policy and work with it to continue to provide for their fami-

lies and supply America with the best, most reliable and safest food and fiber in the world.

Mr. Chairman, I look forward to hearing from the panel today and I thank you.

STATEMENT OF EUGENE MOOS

Senator COCHRAN. Mr. Moos, you may proceed.

Mr. MOOS. Thank you very much, Mr. Chairman and Senator Kerrey.

I am pleased to be able to appear before you this morning to discuss our 1997 budget and program proposals for our mission area, the Farm and Foreign Agricultural Services.

In addition to our administrators, Grant Buntrock of the Farm Service Agency and Gus Schumacher of the Foreign Agricultural Service, with me at the table this morning is Ken Ackerman, who is presently the Deputy Administrator for Risk Management.

This may be the last day that we will be able to address him in that fashion, because I understand the Secretary may make some announcement regarding an Executive order establishing a new risk management agency within the Farm and Foreign Agricultural Services mission area. And so we will be looking forward to that.

In addition, we have on my right, here, Dennis Kaplan from the budget office of USDA. We also have a number of associate administrators as well as deputy administrators and budget specialists sitting behind me in the first row.

I feel confident that we should be able to answer most of the questions that you may pose for us this morning.

In addition to including my full statement in the record, I would ask that the statements of both of our administrators, for the Foreign Agricultural Service as well as the Farm Service Agency, be included in the record as well.

Senator COCHRAN. They shall be, and we appreciate having those statements.

Mr. MOOS. Mr. Chairman, I would like to preface my remarks this morning by noting that the 1997 budget was developed prior to the enactment of the new farm bill, which of course is going to affect many of the programs in this mission area during 1997 and the later budget years.

The legislation will affect the kind of programs we offer and how those programs are delivered. We are also reviewing the provisions of the new legislation to determine what adjustments are needed in our 1997 budget proposals, and will advise the committee of the results once our review is completed.

I apologize for the fact that most of our testimony is based on the budget which reflects existing law at the time it was prepared. And so there will be many changes made as we adapt to the new farm act, the FAIR Act.

I also want to mention that the Department is working energetically to implement the provisions of this new farm bill, and I think we have made real good progress in this effort.

One of our goals is to disseminate information to our farmers and ranchers so that they are aware of the new commodity provisions of the legislation and can make quick and informed decisions on 1996-crop production planning.

The Secretary has also announced that signup for the production flexibility contracts will begin on May 20 and extend through July 12. Advance payments will be made 30 days after the contracts are approved by the Farm Service Agency, and final payments, of course, will be made by the end of the fiscal year, September 30.

In our Farm Service Agency, we face a huge challenge in making this process work on time and work well. At the moment, FSA administers the farm credit programs and the crop insurance and associated risk management activities, as well as the Conservation Reserve, Agricultural Conservation, and Emergency Conservation Programs.

It also administers the domestic commodity price and income support programs of the Commodity Credit Corporation. Under the new farm bill, risk management will be separated from the Farm Service Agency, and a new agency will be established.

The Farm Service Agency delivery system for most of these programs represents a major part of the network of county-based offices, which are currently being consolidated and streamlined by the Department. Approximately 500 county office locations have been moved or closed to date in this process of consolidating the county-based offices into about 2,500 USDA service centers nationwide.

The budget provides \$1.1 billion for salaries and expenses for the Farm Service Agency in 1997, for the administration of its programs. However, the Farm Service Agency budget for salaries and expenses will have to be adjusted as the new budget is prepared for the new Risk Management Agency. Some portion of the funds and staff-years requested by the Farm Service Agency in our 1997 budget will need to be redirected to that new agency.

The Farm Service Agency will need to reduce staffing in 1997, given the total level of funds available. Also, the requirements of the new farm bill may necessitate reexamination of the staffing and funding requirements for the Farm Service Agency, both for this fiscal year, 1996, as well as for fiscal year 1997. We will keep the committee apprised as we examine the legislation and consider its effects on the workload.

At this point, I would mention the fact that when we first reviewed the Freedom to Farm legislation and made an estimate of the administrative workload adjustment that would be associated with that new legislation, we estimated that we would see about a 17-percent decline in the administrative workload. However, as we all know, the Freedom to Farm Act was not the only provision included in the new FAIR Act. And as a consequence, and given the changes that are going to be made both in our risk management operations and conservation, as well as other changes that we are looking at in the new farm legislation, the original estimate of a 17-percent reduction in overall administrative staff and salaries and expense support is probably an overestimation. As things look now, we will be lucky to get by with the personnel that we have aboard as we look to complete our transition through the 1996 budget year and into the 1997 budget year.

Now turning quickly to some of our farm credit programs, the 1997 budget provides for a total of \$3.2 billion in farm loans and

credit guarantees, which is essentially the same as the program levels of 1995 and 1996.

I would like to make a special note regarding our farm credit-related program for the socially disadvantaged: Only \$1 million was appropriated for this activity in 1996 for the grants to provide outreach and technical assistance to the socially disadvantaged. Our budget proposes that the program be restored to a funding level of \$3 million. In support of this request, the Department will submit a report to Congress within the next few weeks, in accordance with the congressional directive for a study of that program.

Now turning to our conservation programs, the Conservation Reserve Program is, of course, the major conservation program administered by the Farm Service Agency. A total of about 36.4 million acres has been enrolled in the CRP to date, and we would expect that level to continue in the future.

During 1995, the Department allowed contract holders to terminate their contracts early on 684,000 acres, and a 13th signup was held last September to replace those acres with more environmentally sensitive acreage.

And as you remember, on January 25, 1996, due to the tight crop supply outlook, the Secretary announced that the Department will again offer an early-out option for certain producers whose contracts expire on or before September 30, 1996. Also, the new farm bill broadens the scope of the early-out by permitting acreage that has been in the Conservation Reserve Program at least 5 years to be withdrawn upon 60 days' notice. Acreage that will be withdrawn will have to meet certain eligibility criteria in order to ensure that environmentally sensitive land remains under contract.

In addition, the Secretary has announced that CRP contracts expiring on September 30, 1996, may be extended for 1 year. We will shortly be making an announcement about how that will take place.

The Farm Service Agency also provides cost sharing to landowners to restore and protect agricultural land and water resources under our Agricultural Conservation Program and to assist in rehabilitating farmland damaged by natural disasters under the Emergency Conservation Program.

Although this budget includes funding for ACP at \$75 million, the new farm bill has replaced the ACP, as well as certain other conservation activities, with a new Environmental Quality Incentives Program. This program will be funded by the Commodity Credit Corporation. As a result, the budgets for Farm Service Agency and the Natural Resources Conservation Service will need to be adjusted to accommodate that change.

This year, we are not requesting funding for the Emergency Conservation Program due to the unpredictable nature of disasters. Should emergency situations arise requiring the Emergency Conservation Program assistance, we would anticipate requesting supplemental funding, just as we have done recently.

As we all know, the domestic farm commodity price and income support programs are administered by the Farm Service Agency and financed through the Commodity Credit Corporation.

Under the provisions of the 1990 farm bill, Commodity Credit Corporation outlays are now the lowest that they've been in 15

years. They have steadily declined from a high of \$26 billion in 1986 to \$6 billion in 1995. I think we all should be proud of the fact that this has resulted from legislative program reforms and growth in demand, particularly in the export sector.

Under the new farm bill, which replaces major portions of the price support programs with fixed payments under long-term market transition contracts, our preliminary estimate for Commodity Credit Corporation farm program outlays is about \$6 billion in 1996 and increases to about \$8 billion in 1997.

Now turning quickly to our international programs, I am pleased to report that 1995 was a banner year for U.S. agricultural exports. The value of U.S. exports increased for the fourth consecutive year and set a new record at \$54.1 billion last year.

Exports were up in all major product categories—bulk, intermediate, and consumer-ready products. I am happy to announce that we are now projecting another record year for 1996, with agricultural exports this year expected to exceed \$60 billion.

As you may remember, I announced at the 1994 hearing that I had set a goal for our Foreign Agricultural Service, to increase our exports by 50 percent by the year 2000. It now appears we could reach that goal before that year.

Our 1997 budget proposals continue the Department's commitment to increasing exports by providing a total program level of just under \$8 billion for export-related activities.

For the Commodity Credit Corporation export credit guarantee programs, the budget provides \$5 billion for GSM-102 short-term guarantees, and \$500 million for GSM-103 intermediate-term guarantees.

Included within the program level for GSM-102 guarantees are two new credit activities which were first proposed in last year's budget: the supplier credit guarantee program, which is a component of our so-called greenbox initiative, and a facilities financing guarantee program.

Greenbox initiatives are export promotion and enhancement programs and activities that are permitted under the Uruguay round agreement.

As part of the administration's greenbox initiative, last year's budget requested increased funding for the Foreign Agricultural Service for a number of its trade and export promotion activities. We are very pleased that this committee was able to provide an increase for the Foreign Agricultural Service in the 1996 Appropriations Act. With the additional funding, the agency has been able to increase its support for a number of these activities, including the Foreign Market Development Cooperator Program, the Cochran Fellowship Program, international trade shows and missions, and a foreign agricultural sanitary and phytosanitary trade policy team.

Again this year, we are requesting additional funding for the Foreign Agricultural Service in order to further the goals of our greenbox initiative and, more especially, of course, to increase our export opportunities. The budget provides appropriated funding of \$137 million for the Foreign Agricultural Service. This is an increase of \$12 million, or approximately 10 percent above last year's level.

Our proposals include increased funding to continue expansion of the Foreign Agricultural Service's overseas office structure, and for a number of Foreign Agricultural Service market development activities. These include an expansion in the Federal/State Market Improvement Program, and a new Distributor Development Program.

The budget also provides an increase of \$4 million for the Foreign Agricultural Service's contribution to the Market Development Cooperator Program.

For Public Law 480 foreign food assistance, the budget provides a total program level of just over \$1.1 billion. This is expected to provide approximately 3.2 million metric tons of commodity assistance in 1997, slightly below the current estimate for 1996 of 3.4 million metric tons.

For the Market Promotion Program, our budget provides funding of \$110 million, the same as we had for 1996. However, as we all know, the provisions of the new farm bill reduce both the 1996 and 1997 levels for our program to \$90 million.

In closing, Mr. Chairman, I would like to state that the future holds great promise for American agriculture. Steps toward greater trade liberalization and growing demand for our products in foreign markets present us with great opportunities as well as great challenges. I believe the Department of Agriculture has an important role to play in assisting American farmers and ranchers to take advantage of these opportunities.

The programs of the Farm Service Agency and the Foreign Agricultural Service are designed to strengthen the partnership between the Government and the agricultural community.

We have taken important steps in recent years to improve the delivery of our service, while also reducing the cost and size of our operations. And although many challenges remain, I believe these agencies have made great progress in becoming more farmer-friendly and, with the continued support of this committee, will continue to do so.

That concludes my statement, Mr. Chairman. And I would be happy, as would my colleagues, to attempt to answer any questions you may have.

PREPARED STATEMENTS

Senator COCHRAN. Thank you, Mr. Secretary. We have your complete statement, and it will be made part of the record along with the statements of Mr. Buntrock and Mr. Schumacher.

[The statements follow:]

PREPARED STATEMENT OF EUGENE MOOS

Mr. Chairman and members of the Committee, I am pleased to appear before you this morning to discuss the 1997 budget and program proposals for the Farm and Foreign Agricultural Services mission area of the Department. With me today from the Farm Service Agency are: Grant Buntrock, the Administrator; Kenneth Ackerman, Deputy Administrator for Risk Management; Lou Anne Kling, Deputy Administrator for Farm Credit; and David Hall, Budget Director. I am also accompanied by officials of the Foreign Agricultural Service: August Schumacher, Administrator; Timothy Galvin, Associate Administrator; Christopher Goldthwait, the General Sales Manager; and Lynnett Wagner, Deputy Administrator for International Cooperation and Development. Dennis Kaplan from the Department's Office of Budget and Program Analysis is here as well.

Statements by the Administrators, providing details on their agencies' budget and program proposals for 1997, have been submitted to the Committee. My statement will summarize the proposals, after which we will be pleased to respond to your questions.

Before addressing the specific budget proposals, I would like to emphasize that the 1997 budget was developed prior to the enactment of the new Farm Bill, which will affect many of the programs in this mission area over the 1996-1997 period and beyond. This legislation will affect the kind of programs we offer and how the programs are delivered. We are reviewing the provisions of the new legislation to determine what adjustments are needed in our 1997 budget proposals. Once that review is completed, we will advise the Committee of the results. The Department stands ready to provide whatever assistance the Committee may need as you review our budget proposals and work to complete action on the 1997 appropriations bill.

I also want to state at the outset that the Department is working energetically to implement the Farm Bill provisions, and we have already made good progress in this effort. One of our first goals is to disseminate information to our farmers and ranchers so they are aware of the commodity provisions of the new legislation and can make informed decisions on 1996 crop production. With respect to the commodity provisions, our schedule calls for sign-up for Production Flexibility Contracts to begin May 20 and to extend through July 12. Advance 1996 payments will be made 30 days after the contracts are approved by FSA and final payments will be made by September 30.

FARM SERVICE AGENCY

The Farm Service Agency faces a huge challenge in making this process work on time and work well. At present, the FSA administers the farm credit programs, crop insurance and associated risk management activities, as well as the Conservation Reserve, Agricultural Conservation, and Emergency Conservation Programs. It also administers the domestic commodity price and income support programs of the Commodity Credit Corporation (CCC). Under the new Farm Bill, risk management will be separated from FSA and a new agency will be established.

The total program resources administered by FSA include \$3.2 billion in farm credit loans and guarantees; \$2.0 billion in conservation programs; \$2.5 billion in crop insurance; and the multibillion-dollar CCC programs. The FSA delivery system for most of these programs represents a major part of the network of county-based offices which are currently being consolidated and streamlined by the Department. Approximately 500 county office locations have been moved or closed to date in the process of consolidating the county-based offices into about 2,500 USDA Service Centers. This process is a joint effort among FSA, the Natural Resources Conservation Service, and the Rural Economic and Community Development agencies.

FSA SALARIES AND EXPENSES

Our budget proposals provide \$1.1 billion for salaries and expenses of the FSA in 1997 for the administration of its programs. This is \$101 million above the estimate for 1996. However, \$75 million of this increase reflects a partial shift from mandatory to discretionary funding of the reimbursements to private crop insurance companies for certain delivery expenses. This change was required by the 1994 crop insurance reform legislation; however, the new Farm Bill has eliminated the need for these funds in 1997. The balance of the \$26 million increase for FSA will cover increased costs of telecommunication and other expenses associated with reorganization and service improvements and pay cost increases.

Staff-year ceilings for FSA are 6,767 Federal staff-years and 12,461 non-Federal county office staff-years. These levels are significantly below the estimated 1996 levels of 13,224 non-Federal county staff-years and 7,281 Federal staff-years.

The requirements of the new Farm Bill necessitate re-examination of the staffing and funding requirements for FSA for both 1996 and 1997. For example, the FSA budget for salaries and expenses and its staff-years will now have to be adjusted as a budget is developed for the new Risk Management Agency. Some portion of the funds and staff-years requested for FSA in 1997 will need to be redirected to the new agency. We will keep the Committee apprised as we examine the legislation and consider its effects on workload.

FARM CREDIT PROGRAMS

The Department's farm credit programs continue to serve as a vital source of credit for our Nation's farmers and ranchers. Over the last decade or more, these programs have changed significantly. No longer are they limited to direct lending, but rather guarantees of loans made by private lenders now comprise the bulk of our

credit activity. Moreover, far more attention is being paid to repayment ability and adequate security. The substantial losses that have been incurred in recent years are due almost exclusively to loans made in prior years—as far back as the 1970's.

The 1997 budget provides for a total of \$3.2 billion in farm credit loans and guarantees, which is about the same amount as 1995 and 1996. Of this amount, \$1.75 billion would be unsubsidized farm operating loan guarantees; \$250 million, subsidized farm operating loan guarantees; \$445 million, direct farm operating loans; \$650 million, unsubsidized farm ownership guarantees; and \$50 million, direct farm ownership loans. Only the amount available for direct farm operating loans would be less than the level that is expected to be supportable with 1996 appropriations—by about \$134 million. However, the request for direct farm operating loans reflects the introduction of a “line of credit” approach which streamlines the application process and ensures funding availability to borrowers who require several years of operating assistance.

The emergency loan program is proposed for termination because farmers with disaster losses can receive assistance under the regular farm operating and farm ownership programs. Their losses are also likely to be covered under the federally subsidized crop insurance or non-insured assistance payment programs. Termination of the emergency loan program was proposed in the second report of Vice President Gore's National Performance Review.

The budget provides for \$50 million in credit sales, which would require about \$5 million in budget authority. Congress has not funded this program since 1994 and, as a result, the Department has been at a disadvantage in trying to meet its commitments under current law to give priority in the sale of inventory property to socially disadvantaged and beginning farmers and ranchers. Also, only \$1 million was appropriated in 1996 for grants to provide outreach and technical assistance for the socially disadvantaged. The budget proposes that the program be restored to a funding level of \$3 million. In support of this request, the Department will submit a report to Congress within the next few weeks in accordance with the congressional directive for a study of the program.

RISK MANAGEMENT

The new crop insurance program has, in our opinion, met the expectations of the reform that was enacted in 1994. While there may have been some start-up problems, the fact is that about 80 percent of the 1995 crop was covered by crop insurance. More than half this coverage was at the additional coverage levels that producers buy up through private companies. But, even at the catastrophic coverage level, which provides a guarantee of 50 percent of normal production at 65 percent of expected price, the Nation's producers are protected from devastating losses and do not need to rely on ad hoc disaster assistance as they have in the past. Where crop insurance is unavailable, there is permanent authority for non-insured assistance payments, which are comparable to catastrophic coverage but require a 35 percent areawide loss as well as an individual loss to trigger payment.

Very preliminary indications point to the program for crop year 1995 operating within the 1.1 loss ratio as required by the reform legislation. This level of performance is also projected to continue for the 1996 and 1997 crop years.

The 1997 budget provides full funding for continuation of the insurance program. In accordance with the reform legislation, reimbursements to private companies for delivery expenses will be limited to 29 percent of premium as opposed to the current 31.5 percent for 1996. Further, unlike 1995 and 1996 when the entire reimbursable amount could be paid out of the mandatory Federal Crop Insurance Fund, the reform legislation limited the portion that can be paid out of the Fund for sales commissions in 1997 to only 8.5 percent of premium. It was estimated that this limitation would require \$75 million in discretionary funding for sales commissions, to be paid from the FSA salaries and expenses account. The new Farm Bill eliminates the need for this discretionary funding in 1997. Sales commissions will continue to be paid from the mandatory crop insurance fund. The budget also requests that “such sums as necessary” be appropriated for premium subsidy and other expenses paid out of the Fund.

CONSERVATION PROGRAMS

The Conservation Reserve Program (CRP) is the major conservation program administered by FSA. Through this program, producers receive annual rental payments, usually for a 10-year period, to remove highly erodible cropland and other environmentally sensitive land from production. Participants also receive cost-share help to establish cover. A total of about 36.4 million acres has been enrolled in the CRP since it was initiated in 1986. The program has produced significant environ-

mental and economic benefits, and its continuation remains one of the Administration's top priorities.

In December 1994, the Department announced a series of actions to extend and modify CRP, including offering contract holders the opportunity to terminate contracts prior to scheduled maturity dates. This "early-out" option was important in improving the program's targeting and flexibility by replacing certain acres with more environmentally sensitive acres under new 10-year contracts. A total of 684,000 acres took advantage of this first "early-out" opportunity and replacement acres have already been accepted into CRP as a result of the 13th signup held last September.

On January 25, 1996, due to tight crop supplies, the Secretary announced that the Department will again offer an "early-out" option for certain producers whose contracts expire on September 30, 1996. Acreage will have to meet certain eligibility criteria in order to ensure that environmentally sensitive land remains under contract. Rules governing the "early-out" option have been published in the Federal Register, and signup dates have been announced for March 20–April 26. I should note that the new Farm Bill has broadened the scope of the "early-out" to include land which has been in the CRP for at least 5 years. As announced by the Secretary, the Farm Bill provisions permit producers with eligible land in CRP to terminate their contracts at any time with 60 days' notice to the Department.

In addition, the Secretary has announced that CRP contracts expiring on September 30, 1996, may be extended for one year. Although uncertain, preliminary estimates are that over one million acres will be accepted under the new early release option and that 69 percent of expiring contracts will seek extensions.

The budget request reflects these changes as well as our intention to hold an additional signup for nearly 1.6 million acres in calendar year 1997, as mandated by the Agriculture Appropriations Act for Fiscal Year 1996. This signup would bring total enrollment to 38 million acres. However, the new Farm Bill will limit total enrollment at any point in time to 36.4 million acres.

FSA also currently provides cost sharing to landowners to restore and protect agricultural land and water resources under the Agricultural Conservation Program (ACP) and to assist in rehabilitating farmland damaged by natural disasters under the Emergency Conservation Program (ECP). Funding for ACP was requested at \$75 million, the same level appropriated by Congress in 1996. However, the new Farm Bill has replaced the ACP as well as certain other conservation activities with a new Environmental Quality Incentive Program to be funded by CCC. As a result, the budgets for FSA and the Natural Resources Conservation Service will need to be adjusted.

We are not requesting funding for ECP in 1997. However, on March 5, 1996, the President requested supplemental funding of \$30 million for ECP in 1996 to assist with flood damage in the Northwest and other areas.

COMMODITY PROGRAMS

Domestic farm commodity price and income support programs are administered by FSA and financed through CCC. Under the provisions of the 1990 Farm Bill, CCC outlays are now the lowest in 15 years. They have steadily declined from a high of \$26 billion in 1986 to \$6 billion in fiscal year 1995. This has resulted from legislated program reforms and growth in demand, particularly exports.

Our 1997 budget estimates were prepared prior to the enactment of the new farm program provisions which will be in effect for the 1996 and later crops. Our estimates reflect the assumption that the programs provided by the Food, Agriculture, Conservation, and Trade (FACT) Act of 1990 and the budget reconciliation acts of 1990 and 1993 would be continued. Using this assumption, CCC net outlays for 1996 would be just over \$3 billion. Our estimate for 1997 under these assumptions is less than \$4 billion.

We estimate that the new Farm Bill will increase CCC outlays by about \$3 billion in 1996 and roughly \$4 billion in 1997. However, had no farm bill been enacted the Department would have been required to implement permanent law provisions of the Agricultural Act of 1949 which would have increased CCC outlays by a substantially greater amount.

CCC programs have traditionally functioned as a countercyclical safety net to offset wide fluctuations in farm commodity prices and farm income. Outlays under the traditional program provisions are heavily influenced by weather, changes in foreign markets, and other uncertain events affecting prices and farm income. These factors have made CCC outlays difficult to predict in advance with accuracy. Future outlays should be more predictable under the new farm program which provides for fixed market transition payments in place of the variable deficiency payments under the

previous program. However, as program outlays become more stable under a fixed payment scheme, farm income may become even less stable since the safety net effect of our programs will be diminished.

FOREIGN AGRICULTURAL SERVICE

Turning now to the international side of the FFAS program area, I am pleased to report that 1995 was a banner year for U.S. agricultural exports. The value of U.S. exports increased for the fourth consecutive year and set a new record at \$54.1 billion. Exports were up in all major product categories—bulk, intermediate, and consumer-ready products. Equally important, the United States captured 23 percent of world agricultural trade in 1995, the highest level in over a decade. This makes the United States the largest agricultural exporter in the world with a growing lead over our largest competitor, the European Union.

We are now projecting another record year for 1996, with agricultural exports expected to reach \$60 billion. With imports projected at \$29.5 billion, U.S. agriculture will provide a positive balance of trade of \$30.5 billion in 1996, the 37th straight year for these trade surpluses. Our success in achieving this export growth is not only important for American agriculture, but provides benefits throughout the U.S. economy through expanded economic activity, new jobs, and higher incomes.

These results are very encouraging because the future prosperity of American agriculture is closely tied to export growth. With 96 percent of the world's population living outside the United States, most of the future growth in demand for our agricultural products will come from overseas markets. In fact, agriculture is one of the most export sensitive industries in the United States. American agriculture is currently twice as dependent on international markets as the economy as a whole and will be two-and-a-half times as export-dependent by the turn of the century. Clearly, future U.S. farm income will depend upon our ability to compete and sell in international markets.

The Clinton Administration remains firmly committed to export expansion. Over the past year, we have continued our efforts to bolster our international competitiveness and secure improved access to overseas markets. Implementation of the Uruguay Round Agreement on Agriculture and the North American Free Trade Agreement has been important in this effort because of their trade liberalization and market opening provisions. Certain countries are opening their markets for the first time, and U.S. producers are benefiting. Japan and South Korea's actions to open their once closed rice markets are prime examples of this.

While freer trade and growing demand for our products in overseas markets present great opportunities, we face many challenges as well. International markets remain extremely competitive, and we are finding that our competitors are increasing their own export promotion and market development efforts. Consequently, the Department of Agriculture continues to have a vital role to play in working with the private sector to identify emerging market opportunities overseas and in using our export promotion and market development tools to achieve our shared export promotion objectives.

The 1997 budget proposals continue the Department's commitment to these efforts by providing a total program level of just under \$8 billion for our trade and export related activities. As in last year's budget, we are proposing increases in a number of our export promotion activities as part of our "greenbox" initiative. As you will recall, this initiative is designed to ensure that America's farmers and ranchers are able to take full advantage of new market opportunities which result from the Uruguay Round Agreement.

For the CCC export credit guarantee programs, the budget provides a total program level of \$5.5 billion. This includes \$5 billion for GSM-102 short-term guarantees and \$500 million for GSM-103 intermediate-term guarantees. The GSM-102 program level includes two credit activities which were first proposed in last year's budget—supplier credit guarantees and facilities financing guarantees.

The budget provides for \$250 million of supplier credit guarantees to be made available in 1997, an increase of \$150 million over the 1996 level. Under supplier credit guarantees, a component of the Administration's "greenbox" initiative, CCC will guarantee payment by foreign buyers of U.S. agricultural products which are sold on a deferred payment basis. These guarantees are expected to be particularly useful in facilitating sales of processed and consumer-ready products, which are among the fastest growing components of U.S. agricultural exports. We currently expect to have final program regulations for supplier credit guarantees in place later this fiscal year, and will begin programming once the regulations become effective.

The President's budget provides for as much as \$100 million of facilities financing guarantees to be made available in 1997. Under this activity, CCC will provide

guarantees for the establishment and improvement of facilities designed to address infrastructure barriers to increased sales of U.S. agricultural products. To be eligible for guarantee coverage, projects must improve the handling, marketing, storage, or distribution of imported agricultural commodities and products. Although the statutory authority for facilities financing guarantees expired at the end of fiscal 1995, this authority is extended by the new Farm Bill, and CCC will be able to make these guarantees available once new regulations are published.

The budget provides funding for the Department's export subsidy programs—the Export Enhancement Program, Dairy Export Incentive Program, Sunflower Oil Assistance Program, and Cottonseed Oil Assistance Program—at the maximum levels which are consistent with the quantity and expenditure reduction commitments required under the Uruguay Round Agreement. However, provisions of the new Farm Bill limit funding for the Export Enhancement Program to \$250 million in 1997, approximately \$600 million below the level provided in our budget submission.

For Public Law 480 foreign food assistance, the budget provides a total program level of just over \$1.1 billion. This is expected to provide approximately 3.2 million metric tons of commodity assistance in 1997, just below the current estimate for 1996 of 3.4 million metric tons. As the Committee is aware, the Administration put forward a number of recommendations to revise Public Law 480 statutory authorities as part of the new Farm Bill, and most of these are included in the new Farm Bill. In the case of Title I concessional sales, these changes will increase the program's market development effectiveness and streamline its administration and operations. Although the program level for Title I is somewhat reduced in 1997, we believe we will be able to achieve the program's market development objectives with our recommended revisions.

The Market Promotion Program provides cost-share assistance to nonprofit agricultural trade organizations, State regional trade groups, and private companies which carry out export promotion activities overseas. The program has proven to be particularly effective in promoting sales of high value products, which comprise 80 percent of the program's total annual funding. The budget provides funding for MPP at \$110 million, unchanged from 1996. However, provisions included in the new Farm Bill will now limit this funding to \$90 million beginning in 1996.

FAS SALARIES AND EXPENSES

The Foreign Agricultural Service administers the Department's important trade, export promotion, and foreign market development programs. As the Committee will recall, last year's budget requested increased funding for a number of the agency's trade and export promotion activities as part of the Administration's "greenbox" initiative. With the additional funding provided to FAS in 1996, the agency has increased its support for a number of these activities, including the Foreign Market Development Cooperator Program, the Cochran Fellowship Program, international trade shows and missions, and an FAS sanitary and phytosanitary trade policy team. The additional funding has also allowed the agency to initiate a program to consolidate and expand its overseas counselor/attaché and Agricultural Trade Offices (ATO's).

Again this year, we are requesting additional funding for FAS in order to further the goals of our "greenbox" initiative. The budget provides appropriated funding of \$137.1 million for FAS, an increase of \$12.4 million or approximately 10 percent above the 1996 level. These increases are designed to bolster the agency's capabilities and resources to work with the private sector, as well as State departments of agriculture, to increase market access overseas and expand U.S. agricultural exports.

Our proposals include increased funding to continue expansion of FAS's overseas office structure. These increases will allow FAS to open two new attaché offices in Mexican border locations and a new European Union policy information clearing-house in Brussels, Belgium, and to expand two other, existing offices. The budget also requests funding to open three new ATO's in Sao Paulo, Brazil; Milan, Italy; and a Caribbean regional office in Miami, and to expand five other offices.

We are also recommending increased funding for a number of FAS market development activities. These include an expansion in the Federal/State Market Improvement Program (FSMIP), under which matching grants will be provided to State departments of agriculture to improve agricultural marketing systems, and a new Distributor Development Program. This program will develop marketing strategies for specific groups of agricultural products with a high market development potential in fast-growing overseas markets, such as those in the Pacific Rim and Latin America.

The budget also provides an increase of \$4 million for FAS's contribution to the Market Development Cooperator Program. The increased funding will be used to target new activities in selected high-growth and emerging markets, which are consistent with FAS's long-term strategic marketing priorities developed in conjunction with its Cooperator and other private sector partners.

Finally, the budget requests additional funding for increased salary costs and for staffing for the Office of the General Sales Manager (OGSM) to administer the expanded level of supplier credit guarantees to be made available in 1997. In addition, that portion of OGSM funding which in the past has been provided through a transfer from CCC is now proposed for inclusion in the FAS appropriations. Offsetting these increases are reductions to be achieved through savings in agency administrative costs.

This concludes my statement, Mr. Chairman. We will be pleased to answer questions you and other members of the Subcommittee may have regarding our programs and budget proposals.

PREPARED STATEMENT OF GRANT B. BUNTROCK

Mr. Chairman and Members of the Subcommittee, I am pleased to present the fiscal year 1997 budget for the Farm Service Agency (FSA). The budget I am presenting today addresses the broad scope of current FSA responsibilities: price support and related programs of the Commodity Credit Corporation, Federal crop insurance, the farm credit programs of the Agricultural Credit Insurance Fund, conservation, and a number of others. I would like to highlight the budgets for all of these areas and then summarize our request for administrative expenses to support these varied activities.

I would like to emphasize, however, that because the President's Budget was prepared prior to final congressional action on a new farm bill, our 1997 proposals are based on law existing at the time of budget preparation. Some estimates are changing significantly in response to the provisions of the Federal Agriculture Improvement and Reform (FAIR) Act, and I will note these areas as I discuss them. The Department will provide the Committee further information about needed changes as the budget effects of the new provisions are analyzed in more detail.

CONSERVATION

Conservation Reserve Program

The Conservation Reserve Program (CRP) has been steadily evolving since it was authorized by the Food Security Act of 1985. Through refinements to the eligibility criteria as well as modifications consistent with the Food, Agriculture, Conservation, and Trade Act of 1990, we have, over the years, sharpened the program's focus on cropland of special environmental sensitivity and on water quality impacts.

The current CRP enrollment of 36.4 million acres was reached in 1992. Although the Omnibus Budget Reconciliation Act (OBRA) of 1993 established an enrollment target of 38 million acres, appropriations acts since then have prohibited enrollment of new acres. Within these limits, however, we have taken what steps we could to increase the conservation benefits of enrolled acres. During 1995, USDA offered program participants the opportunity to withdraw from or reduce their CRP contracts prior to expiration, without penalty, on the less fragile land in the program. The 684 thousand "early-out" acres thus released were then replaced with acres that meet higher environmental and conservation criteria. A second early-out opportunity began March 20 and extends through April 26 to allow less erodible and less environmentally sensitive acreage to return to production and help ensure a grain supply that is adequate to meet market demand. The new Farm Bill permits producers with eligible land that has been in the CRP for at least 5 years to terminate their contracts at any time, with 60 days' notice to the Department. Also, participants whose contracts expire this year will be offered a 1-year extension.

For fiscal year 1997, the budget proposed an appropriation of \$1.925 billion to carry out the direction given in the 1996 appropriations act to sign up an additional 1.6 million acres. This additional enrollment would achieve the 38-million-acre OBRA goal. However, the enacted Farm Bill, while allowing new enrollments, caps the total acreage at 36.4 million.

Also during 1997, the 10-year contracts signed in 1987, as well as contracts signed in 1986 and extended 1 year, will expire. FSA intends to develop contract extension policy to maximize environmental benefits. Producers extending their contracts would be able to place permanent conservation easements on the highest priority lands.

Under the new Farm Bill, the CRP now utilizes the funds of the Commodity Credit Corporation. Consequently, the CRP appropriation language proposed in the Budget will no longer be needed.

In 1996 we are making payments of approximately \$1.8 billion for rental costs, \$25 million for sharing the cost of permanent cover on replacement acres, and \$7 million for technical assistance. For 1997, program costs are expected to total approximately \$2 billion, consisting of \$1.9 billion for rental and easement payments on previously enrolled and extended acres; \$66 million for cost-sharing of permanent cover on acres replaced or enrolled during 1995 through 1997; and \$21 million for technical assistance. Estimates for 1997 will be reevaluated, however, based on program provisions of the FAIR Act.

Agricultural Conservation Program

In contrast to the CRP, the Agricultural Conservation Program (ACP) shares with producers the cost of carrying out soil and water conservation and water quality measures primarily on agricultural land in production. All farmers and ranchers who can demonstrate the need for cost-share assistance in solving a resource conservation problem are eligible to apply for the program, which may pay up to 75 percent of the cost of approved practices. Technical assistance is provided by the Natural Resources Conservation Service and the Forest Service.

The fiscal year 1996 appropriation of \$75 million has provided \$59.5 million in allocations to States for conservation practices under annual agreements, \$11 million for Water Quality Incentive Projects of the type authorized under section 1439 of the FACT Act, and \$4.5 million for technical assistance. Funding is provided only for the highest priority practices.

The 1997 budget request is \$75 million. However, the FAIR Act discontinues the ACP as a separate program and incorporates its objectives into the new Environmental Quality Incentives Program (EQIP), which is to be funded by CCC.

Emergency Conservation Program

The Emergency Conservation Program (ECP) assists producers in rehabilitating farmland damaged by natural disaster and in carrying out emergency water conservation measures during periods of severe drought. The program shares the cost of practices to restore the land to its productive capacity as it existed prior to the disaster. As might be expected, funding needs for this program vary widely from year to year, depending upon the occurrence of natural disasters.

No ECP funding was provided in the fiscal year 1996 Appropriations Act. Currently, all funds brought forward from the previous year have been allocated to the States. Due to hurricanes in the Southeast, floods in the Northeast and Pacific Northwest, and other recent disasters, the President transmitted to Congress a request for \$30 million in supplemental ECP appropriations for 1996 to assist producers in recovering from the widespread damage.

The Budget requests no funding for fiscal year 1997.

Dairy Indemnity Program

The Dairy Indemnity Program compensates dairy farmers and manufacturers who, through no fault of their own, suffer income losses on milk or milk products removed from commercial markets due to residues of certain chemicals or other toxic substances. In recent years aflatoxin has been the main culprit. Payees are required to reimburse the Government if they recover their losses through other sources such as litigation. The 1997 appropriation request of \$100 thousand would cover program needs in an average year with no major contamination incidents.

COMMODITY CREDIT CORPORATION

Domestic farm commodity price and income support programs are administered by the Farm Service Agency and financed through the Commodity Credit Corporation, a government entity for which FSA provides operating personnel. To finance its programs, the Corporation has the authority to borrow from the Treasury, up to \$30 billion at any one time. Commodity support operations, currently handled primarily through loans, purchase, and payment programs, include those for wheat, corn, soybeans, minor oilseed crops, cotton (upland and extra long staple), rice, tobacco, milk and milk products, wool, mohair, barley, oats, sorghum, rye, honey, peanuts and sugar. Under recent legislation, wool and mohair payments are being phased out, with final program payments occurring this year on marketings through December 31, 1995. Under the FAIR Act, the major commodity support programs are being replaced with a system of production flexibility contract payments, which decline over 7 years.

Commodity Program Outlays

Historically, CCC outlays have been highly variable and difficult to estimate due to the intended role of CCC programs, which has been to offset the negative effects of wide fluctuations in agricultural commodity markets on farm income and commodity prices brought on by unforeseeable changes in weather and foreign markets. In developing the estimates we attempt to capture the impact of economic or other conditions 2 years into the future. The current 1997 budget estimates, for example, largely reflect supply and demand conditions for the 1996 crop, most of which has not yet been planted. CCC outlays for future years should prove more predictable, however, since they will include fixed contract payments.

Last year I reported to you on the declining trend in Federal outlays for farm price and income support programs, from the fiscal year 1986 high of \$26 billion. CCC total net outlays in fiscal year 1995 were \$6.0 billion, \$4.3 billion lower than fiscal year 1994 outlays. Based on the provisions of the 1990 Farm Bill, we projected that fiscal year 1996 outlays would decrease by 46 percent to \$3.2 billion. This would have been the first time CCC outlays would have dropped below \$4 billion since fiscal year 1980. For fiscal year 1997, under the assumptions of the 1990 Farm Bill, total net outlays would have been expected to rise by \$0.4 billion, to \$3.6 billion. Under the provisions of the FAIR Act, however, CCC outlays for commodity and export programs are expected to increase by a net of about \$3 billion in fiscal year 1996 and \$4 billion in 1997.

Reimbursement for Realized Losses

For 1997 we estimate a need for \$1.5 billion to reimburse CCC for its realized losses, a reduction of \$8.9 billion from the fiscal year 1996 reimbursement of \$10.4 billion. In recent years, the appropriations to CCC have been gradually reducing the large balances of unreimbursed losses from previous years. The fiscal year 1996 appropriation completed this process by fully restoring all cumulative unreimbursed realized losses through fiscal year 1996. The unencumbered portion of the Corporation's \$30 billion borrowing authority at the end of 1996 is estimated to be one of the highest year-end balances ever.

Appropriation Language Changes

I would like to highlight two changes to CCC appropriation language proposed in the President's Budget:

- We are proposing to allow CCC to fund costs of the investigation and cleanup of former grain storage sites and to establish a ceiling of \$10,150,000 for these costs in fiscal year 1997. Under the current CCC appropriation language, CCC hazardous waste funds are to be used for operations and maintenance costs only. Because of these limitations, the funding for investigation and actual cleanup of the facilities formerly operated by CCC must come from USDA's Hazardous Waste Management account, which funds a broader range of activities. The restrictions on the CCC authority impede the progress of this cleanup.
- We are also proposing to allow CCC to fund costs related to a private water well testing initiative requested by the Environmental Protection Agency and the States of Kansas and Nebraska and to establish a ceiling of \$600,000 for these costs.

We are reviewing these proposals in connection with the provisions of the FAIR Act and will keep the Committee informed of any needed changes.

FEDERAL CROP INSURANCE

As you know, 1995 was the initial year for the Federal crop insurance system mandated by the Federal Crop Insurance Reform Act of 1994. Required by that Act as a condition of eligibility for certain other USDA programs, participation in crop insurance jumped from some 40 percent of eligible acres to an estimated 80 percent. This represents an increase in insured acreage from about 100 million acres for the 1994 crops to 236 million acres for 1995 crops, which we attribute to the linkage requirement as well as the dual delivery by FSA and private insurance companies. About 107 million acres were covered by catastrophic crop insurance for the 1995 crop. Nearly 129 million acres were insured with "buy-up" coverage, slightly less than projected, probably due to the short span between enactment of the reform legislation and sales closing dates for the crop year. For crop year 1996, we made early release of program information a priority so that reinsured companies would have more time to inform producers about the benefits of higher coverage.

We are pleased to report that the crop insurance program withstood the tests that came its way in 1995. Throughout the Midwest, for example, persistent rains caused prevented or late planting. While similar conditions in 1993 had led to an ad hoc

disaster program, the prevented planting provisions of the current policies obviated the need for an ad hoc program in 1995.

Some new crop insurance options will be available for the 1996 crop year. We will offer a pilot program to insure fruit trees in Florida, and we will test two revenue insurance plans on a pilot basis. One plan, developed by the private sector and reinsured by the FCIC, guarantees revenues based on a proven yield and the higher of a market price determined prior to planting or the price at the time of harvest. The other plan guarantees revenue based on the price determined before planting. Many producers have indicated an interest in revenue products, and these pilots provide an opportunity to test new concepts and determine acceptance by producers.

The 1997 budget estimates for the Federal Crop Insurance Corporation Fund reflect an increase of \$39 million in premium subsidy for buy-up coverage and a related decrease of \$53 million in subsidy for catastrophic coverage. These changes reflect the expectation that, as producers become more familiar with the crop insurance products, customer preferences will shift toward the greater financial security of the additional coverage. While the FAIR Act "de-links" crop insurance from eligibility for other programs by permitting producers to sign a waiver, we hope that many producers will continue to see the advantages of participation. Nevertheless, our estimates will be re-evaluated.

The Budget also projects a decrease of \$95 million in delivery expenses, based on two reform legislation provisions that were to take effect in 1997. One is a reduction in the rate at which private insurance companies are reimbursed for delivery expenses, from the current 31.5 percent of premium to 29 percent. The other is a cap of 8.5 percent on the portion of the reimbursement for sales commissions that can be paid from the FCIC Fund. The latter change would have translated into payment of an estimated \$75 million in sales commissions from the discretionary FSA Salaries and Expenses account in lieu of the mandatory FCIC Fund. However, the new Farm Bill allows us to fund this expense from the mandatory fund in 1997.

While the costs paid from the FCIC Fund are categorized as mandatory spending, they are subject to appropriation. As in fiscal year 1996, the Budget requests "such sums as may be necessary" to ensure that needed funding will be available to cover unforeseeable fluctuations in program costs due to weather or other conditions.

FARM CREDIT AND RELATED PROGRAMS

Agricultural Credit Insurance Fund

The programs of the Agricultural Credit Insurance Fund (ACIF) provide a variety of loans and loan guarantees to farm families who would be unable to obtain credit otherwise. The President's Budget proposes to maintain the overall ACIF program level in fiscal year 1997 at about the current level of \$3.2 billion. Within this total, however, we are increasing our emphasis on guaranteed loans, which are most cost-efficient for the taxpayer because of their low subsidy cost. We are mindful, however, of the continued need for direct loans to assist producers, including beginning farmers and members of socially disadvantaged groups, who show promise for success but would be unable to obtain other credit. Our goal is to assist borrowers, through supervised credit, to achieve a successful agricultural operation and graduate to private credit.

Farm Ownership Loans.—For direct farm ownership loans we are requesting a loan level of \$50 million, which requires an appropriation of just under \$6 million. For guaranteed farm ownership loans in fiscal year 1997, we are requesting a loan level of \$650 million, which requires an appropriation of \$26 million.

Farm Operating Loans.—We are requesting a subsidy appropriation of \$59 million to enable us to make direct farm operating loans of \$445 million. Within this amount, we are proposing to use existing authority to offer a direct line of credit to simplify procedures for producers who anticipate the need for this credit for a number of years. For guaranteed farm operating loans, an appropriation of \$23 million will make possible \$250 million in loans with subsidized credit. For our largest farm operating loan program, unsubsidized guarantees, a request for \$20 million in appropriated funds will cover the Federal cost of \$1.75 billion in loans.

Other Loan Programs.—The Budget also requests \$50 million in credit sales of acquired property, which requires budget authority of \$5.1 million. Without funding for this program over the last two years, beginning and socially disadvantaged farmers who have priority under the law for purchase of property in FSA inventory have been adversely affected.

The Budget requests no funding for emergency disaster loans, in order to encourage participation in the crop insurance program. For disaster-related needs that exceed compensation from crop insurance, producers may apply for regular farm operating loans.

RELATED PROGRAMS

Outreach Grants for Socially Disadvantaged Farmers.—Outreach Grants for Socially Disadvantaged Farmers allow various institutions to operate programs that provide one-on-one training and technical assistance in farm management and production techniques to socially disadvantaged farmers and ranchers. Institutions such as land grant colleges, American Indian community colleges, and others provide the education and services that enable small and minority farmers and ranchers to produce the income needed to service debts, sustain their operations, and provide a reasonable standard of living. Through the assistance offered by this program, more at-risk producers are becoming current in their loan payments to FSA and graduating to other forms of credit. It is a success story for all concerned, and the Department will soon submit to you a report on the program as requested by this Committee.

For fiscal year 1997 we are requesting \$3 million, an increase of \$2 million over 1996. The requested level would allow us to fund 12 entities.

State Mediation Grants.—Since 1987, State Mediation Grants have enabled a number of States to develop programs to deal with conflicts involving distressed agricultural loans. Operated primarily by State universities or departments of agriculture, the program provides a neutral mediator to assist producers and their creditors in resolving loan-related disputes before they reach bankruptcy or litigation. The Department of Agriculture Reorganization Act of 1994 expanded the program from farm credit cases to also include disputes concerning wetland determinations, conservation compliance, pesticides, and other issues. For fiscal year 1997 the Budget requests \$3 million, an increase of \$1 million over fiscal year 1996, to meet the rising demand expected as a result of the program's broadened scope.

ADMINISTRATIVE SUPPORT

The costs of administering all FSA programs are funded by a consolidated Salaries and Expenses account. The account is comprised of direct appropriations, transfers from program loan accounts under credit reform procedures, user fees, and advances and reimbursements from various sources. These reimbursements include funding from the Foreign Agricultural Service (FAS) for administrative support activities provided to FAS by FSA personnel.

For FSA Salaries and Expenses the Budget requests a total appropriated level of \$1.1 billion, an increase of \$101 million over fiscal year 1996. The largest component of this increase is the \$75 million that we estimated would be needed to reimburse reinsurance companies for crop insurance sales commissions. As I explained earlier, all these delivery costs were formerly paid by the FCIC Fund, but for 1997, consistent with the crop insurance reform legislation, the Budget proposed that any amount of commissions over 8.5 percent of premium sales be paid from the Salaries and Expenses account. Accordingly, we proposed a change in our Salaries and Expenses appropriation language to provide current, indefinite authority for this purpose. However, as I mentioned, the new Farm Bill changes the reform legislation requirement and provides for these costs to be paid from the FCIC Fund in 1997.

We are also requesting an increase of \$21.8 million for the annualization of the 1996 pay increase and the proposed 1997 Federal pay raise of 3 percent. Other increases are requested for telecommunications, rent related to office consolidations, and other items. The increases are partially offset by administrative savings and efficiencies in such areas as travel, transportation, and supplies, and by reductions in staffing. The requested funding level will support 6,767 Federal staff-years, a reduction of 514 from 1996, and 12,461 county office staff-years, a decrease of 763. These staffing reductions compare to county office staff-year reductions of almost 1,900 from 1992 to 1995, and Federal staff-year reductions of over 1,000 during the same period.

We are in the process of an extensive review of the workload impacts of program changes under the new Farm Bill. Because the legislation creates a separate agency to administer risk management, one of the aims of the review is to project the workload associated with the new agency as well as the FSA workload involved in carrying out the risk management-related responsibilities that will remain with our county offices. This will allow us to redirect some portion of the requested funding to the new agency. We will keep the Committee appropriately informed.

Mr. Chairman, this concludes my prepared statement. I and my colleagues will be happy to answer your questions and those of the other Subcommittee Members.

PREPARED STATEMENT OF AUGUST SCHUMACHER, JR.

Mr. Chairman, members of the Subcommittee, I appreciate the opportunity to review the work of the Foreign Agricultural Service (FAS) and to present the President's budget request for fiscal year 1997.

1995—A RECORD YEAR FOR EXPORTS

U.S. agriculture chalked up a record-shattering trade year in fiscal year 1995, and trade analysts are forecasting another year of strong growth in 1996. In 1995, agricultural exports surged to an unprecedented \$54.1 billion, easily eclipsing the previous sales peak of \$43.8 billion set back in fiscal year 1981. In fact, U.S. agricultural exports have more than doubled in value since enactment of the 1985 Farm Bill.

Compared with fiscal year 1994, exports climbed by \$10.7 billion, the largest dollar-value increase ever recorded in a single year. Sales were up in all three major categories of agricultural exports—bulk commodities, intermediate products and consumer foods. Export growth substantially out paced imports, raising the fiscal year 1995 agricultural trade surplus to \$24.6 billion—the highest in 14 years.

Exports of wood and fish products also strengthened in fiscal year 1995. U.S. wood product exports were valued at \$7.3 billion, up 5 percent from 1994 and virtually even with the 1993 record. Edible fish and seafood exports, at \$3.2 billion, were up 9 percent. Combined U.S. exports of agricultural, wood and fish products in fiscal year 1995 totaled \$64.6 billion, a 21-percent gain over 1994 and a new all-time high.

Let me put these figures into perspective for you by citing just a few examples of what this means for U.S. agriculture and the economy as a whole.

- For the first time in history, the United States is now exporting more than \$1 billion in agricultural products a week.
- U.S. exports of agricultural, fish, and forestry products to Japan last year totaled a record-high \$16.1 billion, more than half of the total value of new road vehicles imported from Japan in 1995.
- Each day, U.S. producers and processors exported nearly \$14 million worth of fruits and vegetables, almost \$12 million of red meats, more than \$5 million in poultry meat, and around \$3 million worth of snack foods.
- In 1995, the United States became a net exporter of pork (in volume and value terms) for the first time in 43 years. While the United States has been a net exporter of beef (in value terms) since 1988, this year, we're forecasting that the United States will become a net beef exporter (in volume terms) for the first time ever.

As you can see, we're experiencing major—and we think sustainable—growth in export demand as our product mix becomes more diversified and as we implement the trade agreements that have improved market access. The United States is not only the world's largest exporter of agricultural products, but we are also the most reliable competitor. And as domestic farm supports are reduced, export markets become even more critical for the economic well-being of our farmers and rural communities as well as suburban and urban areas dependent upon the employment generated from increased trade.

Last year, I told you about our export goal—\$65 billion by the year 2000. The Department's latest forecast for fiscal year 1996 projects we are well on our way to reaching that goal. The export forecast released just last month anticipates a record-high \$60 billion in exports of U.S. agricultural products, up \$5.9 billion from \$54.1 billion last year. In the first three months of fiscal year 1996, U.S. agricultural exports overall were up 9 percent, with bulk commodities up 25 percent, semi-processed products down about 6 percent, and our consumer food exports up 5 percent. Exports were running ahead of year-earlier levels in eight of our top ten markets.

Some of this success can obviously be linked to our trade policy work. For example, last year the United States and Korea reached an agreement that successfully resolved the U.S. red meat industry's Section 301 petition and the related World Trade Organization (WTO) shelf-life dispute. As a result, U.S. exports of meat and other foods to Korea are expected to increase by at least \$240 million per year in the near term, and by up to \$1 billion annually in 1999.

FAS also played a critical role in bringing the long-standing issue of access to Japan's market for U.S. apples to a successful conclusion, with Washington State apples entering the market in January 1995.

On a multilateral basis, the Uruguay Round agreement and the new World Trade Organization (WTO) represent important first steps in reforming the global trading system, opening markets, and establishing new rules for fair trade. We believe that trade reform is the key to improving economic growth. Free trade stimulates com-

petition, helps gear production to demand, increases employment, boosts investment, and bolsters economic growth.

Some of our success must also be attributed to our food aid and commercial export programs. In fiscal year 1995, GSM-102 export credit guarantee allocations totaled \$4.1 billion and registrations totaled \$2.8 billion for 31 countries and 5 regions. Sales were registered with Mexico for \$1.4 billion of U.S. agricultural products including cotton, feed grains, oilseeds, protein meals, wheat, and vegetable oils; registrations for Pakistan totaled \$200 million for dairy products, feed grains, oilseeds, pulses, and wheat.

In addition, our food aid authorities—Public Law 480, Title I, Section 416(b), and Food for Progress—provided about 1.4 million metric tons of food assistance to 25 countries during fiscal year 1995. The value of these commodities was about \$352 million.

CHALLENGES AHEAD

While we're well on our way to reaching our goal, much work lies ahead. Building prosperity with our trading partners means a shared commitment to trade liberalization and new trade rules; it means reciprocity; it means not just freer trade, but fair trade. All members of the WTO have a responsibility to implement their commitments fully and observe the new disciplines faithfully. One area of increasing concern is sanitary and phytosanitary restrictions. We intend to continue working with our trading partners through the WTO and bilaterally to address these concerns and to ensure that such import restrictions are based on sound science.

In addition, new issues are emerging that require a cooperative approach, such as the trade treatment of biotechnology products. New developments in biotechnology have the potential to increase food production, lower farming costs, improve food quality and safety, and enhance environmental quality. However, these benefits for both farmers and consumers will not easily be realized without greater harmonization of trade policies.

We also continue our work to implement the North American Free Trade Agreement (NAFTA). We are pleased by the progress we have seen under the NAFTA. In agriculture alone, two-way trade with both of our North American trading partners has increased by nearly 20 percent since 1993, the year before the agreement went into effect. U.S. agricultural exports to our two neighbors in fiscal year 1995 totaled a record \$9.5 billion.

NAFTA has also facilitated cooperative efforts to deal with trade issues that arise. The recent report of the U.S.-Canada Grains Commission will be useful to both our governments in dealing with a difficult issue. Another recent example is a memorandum of understanding with Mexico, under which Mexico's livestock producers dropped an anti-dumping suit against U.S. producers in exchange for U.S. credits to replace Mexico's drought-reduced heifer herds. The road is not always smooth, and we face some contentious issues ahead, but cooperation can sometimes lead to a successful outcome.

Work also continues on the Free Trade Area of the Americas, or the FTAA, proposed by President Clinton at the Summit of the Americas in December 1994. Countries throughout this region have agreed to hemispheric free trade by 2005.

Another important initiative has been undertaken through APEC—Asia-Pacific Economic Cooperation. APEC has embarked on a very ambitious agenda for establishing free trade among the broad Asian-Pacific community of nations. Last November in Osaka, the leaders of APEC nations committed themselves to trade liberalization in all sectors, including agriculture, and set out an agenda to achieve these goals. We expect these commitments to be reflected in the action plans that APEC members are now developing to proceed on this agenda.

We also will face challenges in our work with developing countries. These countries are important to U.S. agricultural interests now and will become even more so as we move into the next century. Two dollars out of every five that U.S. farmers earn in world markets are earned in developing markets, and these markets are where the biggest growth opportunities lie for U.S. agriculture. We will continue to use all the tools available to us—the Cochran Fellowship program, scientific exchanges and collaborative research, for example—to help ready American agriculture for the next century.

But in the end, we believe that open markets and expanded trade offer the best and surest ways to economic growth and prosperity. But these opportunities won't just fall into our laps. Our competitors have agricultural export promotion programs in place to compete in the new trading environment. The EU and other countries assist their producers and small businesses to develop foreign markets through activities similar to our Market Promotion Program (MPP) and Foreign Market Development

opment (FMD) Program. EU member state governments contributed \$117 million last year to agricultural producer and small business market development activities. The Australian, Canadian, and Chilean governments provided \$70 million to producer promotion boards and small businesses for export market development in the same period.

Market development expenditures by governments and producer boards for the 18 countries surveyed by FAS totaled \$680.4 million in 1994/95. Australia, France, the Netherlands, and New Zealand spent between \$80 million and \$125 million each to promote agricultural exports.

As our study shows, our competitors are not standing still. We in the United States can not stand still either. We must continue to:

- identify constraints to U.S. exports and implement strategies for overcoming these constraints;
- aggressively pursue reductions of trade barriers and trade-distorting practices on the part of key trading partners;
- ensure that U.S. farmers and our research community have information about areas of emerging foreign demand;
- defend U.S. agricultural interests by keeping U.S. policy views before the international community;
- strengthen the export knowledge and skills of producers, processors and exporters so they can compete more effectively in the international marketplace;
- educate foreign buyers on the merits of U.S. products and how they can be purchased; and
- support economic development efforts, especially in emerging markets and developing countries.

It is only through these aggressive measures that we will succeed in meeting the competitive challenges facing us now and in the future.

FAS BUDGET REQUEST

These challenges that I just described illustrate why I believe FAS must continue to play a prominent role in export expansion. Today's budget realities mean that government must be leaner and more efficient, but the era of responsive government is not over. While there are things that government can't or shouldn't do, there are many legitimate public needs that only government can meet. Whether it's working to resolve trade disputes, supporting the American private sector as it battles in export markets against foreign competitors flush with funds from their national treasuries, or educating potential exporters, FAS has a vital role to play.

Mr. Chairman, last year the President's fiscal year 1996 budget for FAS proposed just such an approach. While not all of the proposed increases were funded, the support of this Committee allowed FAS to take significant steps toward achieving the Department's export expansion objectives.

With increased appropriations in fiscal year 1996, FAS expanded market development activities including the Cooperator Program and our international trade show and trade mission activities. Additional funds were allocated to the Cochran Fellowship Program, which brings funding for this important activity to near \$2.5 million. To confront what is rapidly emerging as the most important type of non-tariff barrier—sanitary and phytosanitary standards—a sanitary and phytosanitary (SPS) trade policy team was established.

Additional funds in fiscal year 1996 allowed FAS to initiate a program to consolidate and expand our agricultural counselor/attaches and trade offices overseas, with an increased emphasis on market development activities in key emerging markets. During fiscal year 1996, we have begun to focus on domestic outreach efforts by establishing the FAS Home Page on the World Wide Web and by placing FAS employees on temporary duty (TDY) status in strategic locations around the United States to facilitate the entry of small- and medium-sized producers into the export market.

We believe the future offers continued opportunity for the expansion of U.S. agricultural exports. Strengthening our ability to compete globally has the direct payoff of increased farm income for America's farmers and ranchers and the continued economic development of rural communities. Our fiscal year 1997 request builds on the foundation provided by this Committee in fiscal year 1996.

Mr. Chairman, the fiscal year 1997 FAS budget proposes a funding level of \$137.1 million and 923 staff-years, an increase of \$12.4 million and 16 staff-years above fiscal year 1996 levels. Much of this increase contributes to the Administration's commitment to increase program levels for "greenbox" and other GATT-consistent export promotion and related programs. In addition, the portion of the Office of the General Sales Manager previously funded from CCC is included in the fiscal year 1997 FAS appropriation request.

Specifically, our budget proposes to:

1. *Improve market development*

We are requesting an increase of \$4.0 million for the Foreign Market Development Cooperator Program. At the direction of this Committee, the activity level for the Cooperator Program has been maintained at \$34 million for the past two fiscal years, using carryover balances as necessary. As the result, carryover balances are nearing depletion. This increase, coupled with a \$2.0 million increase this Committee approved for fiscal year 1996, will help restore funding continuity for this program, and avoid having to curtail FAS market expansion efforts overseas. In fiscal year 1997 FAS will be adding a competitive process for awarding funds to participating Cooperators. This process will place emphasis on initiatives that target new market opportunities and achieve administrative efficiencies. We believe that maximizing U.S. agricultural exports is best achieved through a cooperative effort between USDA and producers, with costs shared by both parties. The cooperative relationship of the private sector and the Department, facilitated through the Cooperator Program, is key to achieving USDA's export expansion goals.

2. *Strengthen Our Overseas Marketing and Information Base*

Using USDA's Long-Term Agricultural Trade Strategy as a guide, we examined the FAS overseas field structure in the context of our locations in emerging market regions with the greatest growth and development potential for U.S. agricultural exports and our ability to monitor the implementation and enforcement activities for trade agreements. During fiscal year 1996 we are undertaking the initial steps to begin repositioning our existing field resources accordingly. USDA's overseas presence is enhanced by the co-location of selected Foreign Market Development Cooperators. Efforts to achieve increased cost-sharing, which could include rental payments, with these Cooperators will continue. For fiscal year 1997, we are requesting \$4.2 million to open seven new overseas offices and expand seven others in key international markets. This will support the following changes:

Summary of ATO Expansion

<i>Location/action planned</i>	<i>Cost</i>
Hamburg, Germany—Expand existing ATO	\$325,000
Milan, Italy—Convert attaché office to ATO	470,000
Guangzhou, China—Expand existing ATO	285,000
Shanghai, China—Expand existing ATO	295,000
Sao Paulo, Brazil—Open new ATO	390,000
Jakarta, Indonesia—Expand existing ATO	225,000
Moscow, Russia—Expand existing ATO—290,000	
Miami, Florida—Open new Caribbean Regional ATO	370,000
Total	2,650,000

Summary of Counselor/Attaché Office Expansion

<i>Location/action proposed</i>	<i>Cost</i>
Geneva, Switzerland—Expand existing office	\$265,000
Beijing, China:	
Expand existing office	275,000
Establish temporary duty support office	370,000
Mexico—Establish 2 border offices	380,000
Brussels, USEU—Establish EU policy information center/clearing-house	250,000
Total	1,540,000

3. *Increase Domestic Awareness of Export Opportunities*

We are proposing two initiatives to facilitate export readiness and help link both export ready and new-to-export firms to market entry opportunities. These include:

—*\$1,500,000 for Phase I of a Distributor Development Program.* Recent economic growth in Latin America and the Pacific Rim/Asia, and economic reforms in Russia, are creating unprecedented potential for exporters of U.S. agricultural products. While there is strong consumer interest in U.S. products in these markets, the distribution of U.S. foods is currently constrained by: a lack of knowledge about emerging markets on the part of U.S. exporters; poorly developed marketing systems for food products; and a lack of information about how to buy and market U.S. products.

The proposed Distributor Development Program will develop strategies for groups of products that have particularly high potential in specific markets, to

get ahead of our competition, and firmly establish distribution for U.S. foods in key growth and emerging markets. This multi-year strategy would include market research and an educational campaign for U.S. exporters in the first year; marketing workshops and buying missions in the second; and joint promotions by Cooperators using MPP funds supplemented by Distributor Development funds.

- An increase of \$1,500,000 for FAS funding for the Federal/State Market Improvement Program (FSMIP). FSMIP provides matching funds for State Departments of Agriculture projects intended to improve local marketing systems. Under this proposal, FAS will develop projects designed to expand the predominately domestic focus of producers to the international marketplace. Project activities will include development of innovative marketing techniques to seek outlets for farm products in the international market place and improving State expertise in providing services to encourage marketers into the export market.

4. Improve Our Commercial Credit Tools

An increase of \$345,000 and five staff-years is requested for the Office of the General Sales Manager to support the administration of supplier credit guarantees. This activity is designed to increase the buying power of our customers for agricultural products, particularly oriented toward consumer-ready products not currently covered under GSM 102/103. This activity, a component of the Department's "greenbox" initiative, requires additional support resources because of the new products to be covered and because we expect it will result in a pickup in our overall export credit programming activity and workload.

5. Fund Administrative Adjustments

The budget proposes an increase of \$1.6 million for fiscal year 1997 pay costs. In support of the President's executive order to reduce employment and promote the efficient use of resources for administrative purposes, the budget also proposes a reduction of \$737,000 to be achieved by eliminating 12 FTE and related support costs.

FAS EXPORT PROGRAMS

Mr. Chairman, the commercial export programs we administer are expected to grow in importance as the market-opening provisions of the Uruguay Round Agreement are implemented. Our program proposals provide the tools to meet these new sales opportunities, tempered by the need to reduce federal spending.

For the CCC export credit guarantee programs, the budget proposes a total program level of \$5.5 billion. This includes \$5.0 billion for the GSM-102 program and \$500 million for the GSM-103 program. As part of the GSM-102 program, the budget includes \$250 million for supplier credit guarantees and \$100 million for facilities financing guarantees. Supplier credit guarantees will focus on facilitating sales of processed and consumer-ready products, and programming should begin later this year once program regulations are in place. Facilities financing guarantees will address infrastructure barriers to trade of U.S. agricultural products by focusing on projects that will improve the handling, marketing, storage, or distribution of imported agricultural products and commodities. The Federal Agriculture Improvement and Reform (FAIR) Act of 1996 extended the authority for this activity and guarantees will be made available once new regulations are published.

For the Public Law 480 food assistance programs, the budget proposes a total program level of just over \$1.1 billion. This will support approximately 3.2 million tons of commodity assistance in fiscal year 1997, a reduction of 200,000 tons from the current fiscal year 1996 estimate. While funding for Titles I and III are reduced, the budget proposes higher levels for Title II, ensuring that adequate resources are available to meet the most serious food assistance needs. As the Committee is aware, the FAIR Act of 1996 contains a number of revisions to Public Law 480 statutory authorities. For Title I concessional sales, these changes will streamline program administration and operations while increasing the programs market development effectiveness.

For the Market Promotion Program, the budget proposes a program level of \$110 million for fiscal year 1997, the authorized program level, and unchanged from fiscal year 1996. However, provisions included in the FAIR Act will now limit funding for this program at \$90 million beginning in fiscal year 1996.

For our subsidy programs—the Export Enhancement Program, Dairy Export Incentive Program, Sunflowerseed and Cottonseed Oil Assistance Programs—the budget provides the maximum levels which are consistent with the quantity and expenditure reduction commitments required under terms of the Uruguay Round Agreement on Agriculture. However, provisions of the FAIR Act will limit funding

for the Export Enhancement Program to \$250 million, approximately \$600 million below the budgeted level.

This concludes my statement, Mr. Chairman. I will be glad to answer any questions.

AGRICULTURAL OUTLOOK

Senator COCHRAN. I compliment you on your statement. It is encouraging to hear the optimism about the future for American agriculture. I feel that way, too.

I hope that working together, Congress and the administration and people who do the real work out there, the farmers, we can make that come true, make that a reality, and not just a prediction. We are going to work hard to achieve that.

I am going to defer my questions to allow the Senator from Nebraska to make whatever comments or ask any questions he might have. The Senator from Nebraska.

Senator KERREY. Mr. Chairman, would you like me to—you are giving me yielding time to ask questions about——

Senator COCHRAN. Yes.

Senator KERREY. Very kind.

I would join the chairman: I think the numbers, particularly in exports and the progress we have made there in exports, are stunning and bode well not just for production agriculture, but for all those jobs in rural America that are very important for farmowners as well.

It is a tremendous piece of news when you say you expect to break \$60 billion in exports this year. It is an awfully good piece of news and makes all the rest of it seemingly workable.

CRP EARLY-OUT

Yesterday, Secretary Glickman was quoted saying that we need to do what we can to encourage farmers to plant. We are urging those producers who meet the criteria to exit the CRP.

That is the statement that he made to—to farm broadcasters during a press briefing as USDA headquarters, Mr. Secretary.

I am just saying it straight: I am surprised by the comment. He did say we are not going to take the advice of the Feed Grain Counsel and tear up all the conservation land.

But I do not think we should be sending a signal to farmers that we want them to get out of the CRP. One of the general concerns that I've got about the new farm program with payments being made in a decoupled fashion and prices being as high as they are right now, is that we may literally lose ground in conservation.

You can see an awful lot of soil moving around the air in Nebraska right now. I have just got to say it straight out: I am really worried that this kind of a statement could run at cross-purposes for conservation.

I agree that farmers need to know what their options are, and we have got an end-of-May signup deadline for an early-out program. I just think one of the great success stories in America over the last 20 years has been conservation.

And the CRP in particular has contributed a substantial amount to this. Now, if you want to, make any comments on that.

Mr. MOOS. Well, first of all let me say that Secretary Glickman is dedicated to conservation and to continuing to keep in the Conservation Reserve Program those kinds of environmentally sensitive acres that should continue to be out of production.

At the same time, with the tight supply situation, there is a need for some additional acreage to be in production. And if there are acres within the Conservation Reserve Program that are not environmentally sensitive, then it is a proper time to consider bringing those acres back into production. But in no way does the Secretary or the Department of Agriculture or this administration want to discourage farmers from being involved in good conservation practices, or to be involved in our conservation programs.

Senator KERREY. Well, I am pleased to hear that. I mean, as we move from a regulatory method of encouraging conservation on private land to an incentive-based system, then I do think that we have to make sure that the farmer makes the decision based upon not only what is good for the soil, but what's good for himself, rather than what is good for some group in Washington who may be concerned about prices being too high.

The pressure to tear up land and plant more is coming from people who say, We do not like corn prices. Corn is too high in price. Wheat is too high in price. Other commodities are too high in price. And we think if we tear up the land, plant it, it will drop the price.

I am pleased to see the Secretary did not respond to that pressure. And I think we would find ourselves ruining the day in this country if we were to do that.

I have some questions that I would like to ask Mr. Ackerman about crop insurance.

But before I do, Secretary Moos, one more statement. The CRP—the Department is reported to have said that it may take up to a year to write the new criteria for the CRP. Is that an accurate estimate? I mean, that would be——

Mr. MOOS. No; I do not know where that information came from, but we expect to have the criteria for extension and new enrollment available sooner than that. I will turn to the Administrator of the Farm Service Agency here for a specific time.

Mr. BUNTROCK. We plan to go out for public comment on this program. The conservation title is the one part of the new legislation where we are not quite as much on an expedited basis as we were on the commodity programs, particularly for the new enrollment.

We already have information on the early-out option out before producers. For extension and new signup, we plan to go out with a proposed rule very soon, and we expect to receive comments from producers and others sometime this summer. We will then follow that with the final rule giving the provisions and requirements for the extension and new signup.

We are working on it now. We plan to enlist comments from several groups and get it in motion as soon as we can this year.

Senator KERREY. I believe there was just a single press account that said it could take up to a year. And I suspected that that was inaccurate. And I appreciate that.

CROP INSURANCE

Mr. Chairman, I actually have eight or nine questions on crop insurance. And rather than going through all of them, Mr. Ackerman and I have a good enough relationship, I suspect I can just give it to him and have him——

Senator COCHRAN. That is very good.

Senator KERREY. Get those back to me. They basically entail some examination of the dual delivery system, and some examination as well of the T-yield, use of T-yield calculation as opposed to actual yield, and whether or not our offices are doing as good as the private sector is in providing that, and some evaluation that you might have on this new crop revenue coverage that you all approved for sale out there.

There seems to be a great deal of enthusiasm on the ground for it. And I would appreciate an examination of that. I think that under your leadership, Mr. Ackerman, we have made significant progress in crop insurance.

I just hope that we continue to make progress, because I do see it as the best choice for managing risk. And I note already that wheat farmers are being encouraged to consider ad hoc disaster applications, I think an encouragement that we should not be giving people at this juncture in the Crop Insurance Program.

And I hope that we will continue to make adjustments that will make this product market oriented and adjust it for the customer need.

Mr. ACKERMAN. I would be happy to get you answers to your questions, and I appreciate your comments.

Senator KERREY. Thank you.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

The Senator from Arkansas.

Senator BUMPERS. Thank you, Mr. Chairman.

Mr. Secretary, when I was Governor of my State, I used to complain that being Governor of Arkansas was like being Governor of two States. All the western one-half of the State is in the poultry and beef business; all the eastern one-half raises cotton, soybeans and wheat, and so on.

I used to go over to east Arkansas and tell them they were not getting enough for their grain, go over to west Arkansas and tell them their grain prices were too high. [Laughter.]

U.S. BEEF PRICES

That is the sort of situation you find yourself in, which brings me to this point: Everybody in the country, with the exception of the poultry and beef industry right now, are really doing very well.

When I look at cotton prices at 85 cents and corn at \$4.50 and wheat at \$5.50, most of these farmers probably think they have died and gone to heaven, and we are going to send them a check on top of that.

And this brings me to the problem of the cattlemen, whom I am hearing from more than anybody else now.

First of all, has the virtual stoppage of exports out of Britain had any effect on beef prices here?

Mr. MOOS. I will turn to our Administrator of the Foreign Agricultural Service, but on the surface, we do not seem to see much of an impact from the so-called mad cow phenomenon that is striking at the United Kingdom.

We do see the beginning of some liquidation, which reflects the very tight supply and high prices of grains. The price rationing that is going on thus far has occurred mostly here within the United States in terms of the tight supply of grains. We have seen a reduction in the level of grain going into the ethanol industry. We have seen reductions in the production plans of the poultry producers. And now we are beginning to see some limited liquidation going on in the beef sector, particularly with regard to individual farmer operations.

Senator BUMPERS. Do you want to add anything to that, Mr. Schumacher?

Mr. SCHUMACHER. I think Mr. Moos is absolutely correct. We have not seen problems in the United States. I think, in part, because of going back to the mid-1980's, the industry working with the cattlemen monitored those cattle that came in from Britain very, very closely and know exactly where they are. Most of them have now been liquidated.

I think exports continue to be a lot stronger than perhaps some people have thought. Our overseas customers have full confidence in our beef, and beef exports continue to move smartly, including some movement into Mexico again, based on our initial examination of January figures. So I am reasonably confident that the consumers in the United States and our export buyers overseas have full confidence in the quality of American cattle.

EUROPEAN HORMONE BAN ON BEEF

Senator BUMPERS. Has there been any improvement in the European hormone ban on our beef?

Mr. SCHUMACHER. Secretary Glickman announced a few months ago that we are going to the World Trade Organization. He has met once with Mr. Fischler. We have had consultations in Geneva with a panel, and those have not progressed very well. We are now reviewing within the interagency process and with the STR, Ambassador Designate Bishefsky, what the next steps are going to be in getting our beef into Europe.

Mr. MOOS. I just wanted to add, Senator Bumpers, that we are going to explore every possible means of taking this issue to international forums for some resolution. And it may take some additional time, but we certainly have not lost our focus on trying to do something about this.

Senator BUMPERS. Well, you know, the cattle people just do not have the clout here. And I do not know the answer to this. I mean, they are in a disastrous situation, because the prices of what they feed their cattle are astronomical by historical standards.

And the prices are extremely low. They are getting a double whammy. When you look at what cattle prices were 3 or 4 years ago, for example, compared to what they are now, and corn is selling for \$4.50 a bushel.

CORN SUPPLY

This brings up another question that is not maybe totally in your area. But what are the chances of us running out of corn before fall?

Mr. MOOS. Well, as I said, we are beginning to see some early signs of price rationing. And we are still comfortable with the fact that we will have adequate feed grain stocks to carry us through to the new crop year.

Senator BUMPERS. What are our stocks at this moment, Mr. Secretary, corn?

Mr. MOOS. The last stocks report was about the first of April. Our present stock position is down about 12 to 15 percent from what it was a year ago. And we will probably—

Senator BUMPERS. What percentage of carryover did we have?

Mr. MOOS. Well, we are looking at the prospect for carryover in the range of about 350 to 400 million bushels, if everything continues as planned. Now, one thing that we cannot really nail down at this time, of course, is the export demand side, and the export volumes have been running a little higher than we had earlier estimated. So there may be some further tightening as regard the stock ending levels.

LARGEST PURCHASER OF AMERICAN BEEF

Senator BUMPERS. Who is the biggest purchaser of American beef, what country?

Mr. MOOS. Japan; over \$2 billion last year.

COST OF FARM PROGRAMS

Senator BUMPERS. Let me ask you: Going back to the freedom to farm bill, how much are we going to spend in the 1996 fiscal year under the freedom to farm bill, that is, these checks we are still going to send farmers, whether they farm or not? What's that going to cost in 1996?

Mr. MOOS. I do not remember the exact figure, but it is slightly over \$5 billion.

Mr. BUNTROCK. It is in the mid-\$5 billion range, \$5.5 or \$5.6 billion.

Senator BUMPERS. Do you have the figures for what it would have been under the old law?

Mr. BUNTROCK. For 1996?

Senator BUMPERS. Yes.

[Pause.]

Mr. BUNTROCK. \$3.2 billion under the previous law.

Senator BUMPERS. So we are going to spend roughly \$3 billion more this year than we would have spent under the old law.

Mr. BUNTROCK. Yes.

Senator BUMPERS. Is that correct?

Mr. BUNTROCK. Yes; we are going to spend more under this new law.

Senator BUMPERS. And as I understand it, if commodity prices are anything like—I mean, even rice right now is around \$9.60 to \$9.80 a hundred. And so far as I know, everything else—soybean

is not a program crop, but soybeans are up to almost \$8 a bushel. Cotton, wheat, and corn are all way above target pricing.

I guess that the question is, just to vent my own frustration about what I think was a terrible mistake and a very costly mistake, and in that connection, let me ask you this question.

Mr. Chairman, I do not want to take too much time.

Senator COCHRAN. No; that is fine. You go ahead. I am enjoying this. [Laughter.]

BASE ACREAGE

Senator BUMPERS. OK. I want to know, and I should know this, but I am not on the authorizing committee. I am just on the appropriating committee. So I am not sure how the technical part of this works. But I assume that the farmers are going to get these checks based on their history of subsidies.

Mr. MOOS. Participation in past programs.

Senator BUMPERS. Right. Is this a 5-year history?

Mr. MOOS. Yes.

Senator BUMPERS. Do we take the high and the low out, or do we just use the entire 5-year history?

Mr. BUNTROCK. It is a 5-year history for wheat and feed grains and a 3-year history for upland cotton and rice. What we wind up with is pretty close to the existing commodity base on these farms, for 1996. Under the former program, most of those bases stayed pretty much in place, unless the producer stayed out of the program. If they stayed out of the program, that history did count toward building a base. So, by and large, for most of these farms the existing base acreage under the former commodity programs is what you will have, with a few exceptions where they were out of the program and have since built some base.

COST OF FARM PROGRAMS

Senator BUMPERS. My real question is, Mr. Buntrock, and I am sure you can answer this: It is my understanding that the formula goes down over the 7-year period, maybe not during the first 2 or 3 years. But as I understand it, after the third year, these payments begin to decline rather sharply. Is that correct?

Mr. BUNTROCK. Yes; in the outyears of the 7-year contract, as I recall, these payments decline by about \$1 billion. In other words, they will decline from the \$5 billion range to \$4 billion—

Senator BUMPERS. To \$1 billion?

Mr. BUNTROCK. Around \$4 billion—

Senator BUMPERS. Oh.

Mr. BUNTROCK. For a decline of about \$1 billion over the 7 years.

Senator BUMPERS. Let me just ask you a political question: Do you have any doubt in your mind that at that point, or even before, if cotton went back to 60 cents a pound and corn went back to \$2.50 a bushel, do you have any doubt in your mind but that we would put something exactly like what we are just abandoning back in place?

Senator Cochran, Senator Kohl, Senator Kerrey, none of us, we are not going to abandon farmers. I mean, everybody wanted to put permanent law in the freedom of farm bill to give the farmers some assurance of that. We did not need to put it in.

We are not ever going to abandon the farmers if they get into a disastrous situation. I do not anticipate that happening, but one of the things that is offensive about this whole thing to me is that I know this crowd I serve with.

And I am caught up when it comes to agriculture. We will go right back where we just came from.

FSA STAFFING LEVEL

Let me ask you: How many employees—since we are not going to have to keep up with all the enrollments of crops and go through the 5-month marketing period and make all those determinations as to how much subsidy each farmer is going to get on the targeting price concept, since we do not have to do that anymore, how many employees are we going to lay off in the Department of Agriculture?

Mr. BUNTROCK. Well, Senator, that is an area that we have been working on very diligently the last few weeks to determine, first of all, just what the new farm bill's total impact is on program requirements and program activities.

Obviously, workload is going to go down from what we have had in the past. Also, I think it is important to point out that we have already reduced employment in the Farm Service Agency—

Senator BUMPERS. I know you have, and I give you credit for that.

Mr. BUNTROCK. Somewhere in the neighborhood of 15 percent in the last couple of years. Decisions on acreage reporting requirements, which will be much less, and on some of the other program provisions are going to have an impact on that number of employees. We are going to need all the employees we have today to get the new programs running in the next few months and get information out to farmers so that they understand the programs that will be offered for the next several years. But when you get into the question of calculating payments, considering the normal changes that you have in farms out there that have a turnover rate of sometimes 30 to 40 percent in a lot of areas, we really do not have the bottom line on that.

We are going to be working very hard to develop estimates so that we can come back to have some further discussion in the not too distant future about the 1997 budget.

Senator BUMPERS. Most of that work has been done in the field, has it not? I mean, most of the work on that, farmers coming in, signing up, determining all those things, that is done at the local level, is it not?

Mr. BUNTROCK. That is correct.

Senator BUMPERS. So if you try to lay anybody off down there, Senator Cochran and I will be right on top of you. [Laughter.]

Mr. BUNTROCK. That is where much of the workload is. Of course, it is all through the Agency, but certainly at the field level as well.

Senator BUMPERS. One final question, Senator Kohl, and then I will quit.

I do have some questions on crop insurance. I will submit those in writing.

RICE FOR NORTH KOREA

But I am hearing from my rice farmers because you people bought Thailand rice to send to North Korea. What have you got to say for yourself? [Laughter.]

Mr. MOOS. You are referring to the \$2 million that was dedicated to the World Food Program for purchases for food relief for North Korea.

The Department was consulted as to whether the Public Law 480 Program would reach these kinds of humanitarian needs. After some consideration, it was decided that the Public Law 480 Program was not an appropriate tool or authority to meet those needs. So the administration, still wanting to respond to the threat of starvation and malnutrition in North Korea—and that in itself is a very sensitive political issue—decided that they would ask AID to provide some relief. And so the Agency for International Development, as I understand it, dedicated \$2 million to the World Food Program to assist in the humanitarian relief for North Korea.

Senator BUMPERS. Was that all that was involved, \$2 million?

Mr. MOOS. I am sorry?

Senator BUMPERS. Was that all that was involved, \$2 million?

Mr. MOOS. Yes; \$2 million. And that was added to some additional funds provided to the World Food Program to purchase, I think, a total of about 6.5 million dollars' worth of the cheapest, lowest quality rice available in the world.

Senator BUMPERS. Thank you, Mr. Chairman.

Thank you, gentlemen.

Senator COCHRAN. Thank you, Senator.

The Senator from Wisconsin.

STATE TRADING ENTERPRISES

Senator KOHL. Thank you Senator Cochran, Senator Bumpers.

Mr. Moos, I think this administration has done a commendable job in fostering exports of U.S. agricultural products. Your testimony highlights some of the recent successes in the area of agriculture exports. But I continue to have concerns about our ability to reap the long-term benefits of GATT and NAFTA, unless we are aggressive about enforcing both the details and the intent of those agreements.

I have two specific examples about this: First of all, State trading enterprises. When you testified before this committee last year, Mr. Schumacher and I had a discussion about the activities of State-sanctioned trading enterprises, such as the New Zealand Dairy Board. As you know, I have had a longstanding concern about the activities of export monopolies, such as the New Zealand Dairy Board and the Canadian Wheat Board.

While such State trading enterprises are permitted under the GATT rules, I believe that the export monopoly status that these boards enjoy provides them with a huge competitive advantage over U.S. agricultural exports. And these advantages are now coming to light.

I was pleased to receive a copy of a letter sent recently to Secretary Glickman signed by the leaders of six major farm and commodity groups asking for a meeting to discuss their concerns about

this issue prior to the upcoming ministerial meeting of the World Trade Organization in Singapore in December.

I agree that such a meeting should take place, but I further ask your commitment to do everything within your power to make this issue a priority for the administration. U.S. farmers are willing and able to compete internationally, but as you know, they need to know that the deck is not stacked against them.

Mr. MOOS. Senator Kohl, I want to reinforce what you said in terms of the fact that we consider those kinds of single desk monopolistic selling agencies as unfair competition. And although they are sanctioned under the Uruguay Round Agreement, we in the Department and the administration will continue to pursue on every international floor that we can some sort of discipline on the use of this kind of unfair trade advantage.

EXPORTS TO CANADA

Senator KOHL. All right. I would like to say a word about Canada. This is another longstanding concern I have had, Canada's unwillingness to live up to its commitments under NAFTA and GATT with regard to trade barriers against United States dairy, poultry, and egg products.

I compliment you all for pushing the dispute panel process forward, but it is my understanding that even if the panel finds in favor of the United States' position, that in itself will not necessarily assure that those markets will be open to our products.

So I would like to urge you to keep up the pressure to get those markets open. And if you could provide for the record your assessment of how much you anticipate our exports would increase if Canada were to comply with the NAFTA and GATT requirements, I would appreciate that very much.

Mr. MOOS. We will be happy to supply that information to you. I would say that our exports of agricultural products to Canada continue to increase.

Senator KOHL. Yes.

Mr. MOOS. And so we feel that overall there has been a benefit from the NAFTA as far as agricultural exports to Canada are concerned.

Senator KOHL. Thank you. Thank you, Senator Cochran.

[The information follows:]

CANADIAN EXPORT OPPORTUNITIES

We appreciate the Committee's support of this Administration's efforts to bring down the barriers Canada has put in place affecting dairy, poultry, egg, barley and margarine exports from the United States. As you are aware, the NAFTA panel process is under way, and we hope to have a finding sometime this summer. We are confident that our interpretation will be upheld, which would lead to a set of trading rules which would provide greater market opportunities for U.S. exporters of those products. Since we believe our dairy and poultry sectors are very competitive, we expect that U.S. exports would increase over time, with the actual level of trade being determined by the markets, rather than by government restrictions.

BUDGET REVISIONS

Senator COCHRAN. Thank you, Senator.

Mr. Secretary, I know in your statement you mentioned the impact of the new farm bill and the effect that that could have on out-

lay requirements and budget requirements. Do you contemplate submitting a supplemental request or an amended request based on provisions in the new farm bill?

Mr. MOOS. Yes; we do. We will get that to you as quickly as we complete it.

Senator COCHRAN. That would be very helpful. In that connection, I suppose any reprogramming requests that might be contemplated would be included in that document. We would not have to have two separate—

Mr. MOOS. That is correct. We will break out the new Risk Management Agency and also reflect the restructuring of the various conservation programs. That will all be included in our new budget recommendations.

Senator COCHRAN. As you know, we are contemplating passing a supplemental/rescission/continuing resolution package. We are trying to negotiate right now with the administration on a bill to fund all of those departments and programs that have not yet been fully funded for the balance of this fiscal year. In that connection, are there any anticipated needs for supplementals or deferral or rescission provisions that you would suggest we consider including in that package?

Mr. MOOS. Well, we already have asked for a supplemental increase for our Emergency Conservation Program to meet the needs from some of the disasters that we have seen occur around the United States. It is about \$30 million in additional funding that we are asking for in that continuing resolution.

FARM CREDIT FUNDING

Senator COCHRAN. Are there shortages of funds in the farm credit area where you make production loans, or other loans which need to be brought to our attention?

Mr. MOOS. Well, we always have more applications than we have allocated funds, particularly for the direct loan programs, and particularly the operating loans. So we continue to bring to your attention the need to focus on that.

I am not aware that we are asking for any supplemental increases.

Senator COCHRAN. If you could, for the record, it would be appreciated if you could provide us with the current number of applications that you do not think will be funded in the fiscal year. That would be helpful for us to know.

Mr. MOOS. We will get that information to you.

[The information follows:]

UNFUNDED DIRECT FARM OPERATING LOAN REQUESTS

Currently we estimate that approximately 2,300 applications for direct farm operating loan assistance will be carried over from fiscal year 1996 into fiscal year 1997. However, that number could change significantly given the current conditions in the cattle market as well as nationwide weather-related disaster conditions. Both of these factors could increase the demand for direct operating loans and cause the number of carryover applications to increase.

MOST-FAVORED-NATION STATUS OF CHINA

Senator COCHRAN. There is considerable talk about what we should do about most-favored-nation status with China. That is an

issue that has been discussed in the press, and I know the administration is trying to decide on a policy to recommend to the Congress, and leaders in Congress are trying to figure out what their reaction ought to be on this issue.

As we proceed to consider that, what are the implications for denial or change of most-favored-nation status with China on our export of commodities and sales of food and agricultural commodities to China?

Mr. MOOS. Last year we exported about 2.5 billion dollars' worth of agricultural products to China. And given the growth of demand that is occurring in that country as a consequence of the economic development that is going on, we would expect that China will continue to be a very active market for United States agricultural products, and that we could possibly look to even larger volumes of sales to China in the future.

Senator COCHRAN. So what would happen if we modified or changed the status of most favored nation with China on the export potential in that market?

Mr. MOOS. Well, that becomes very much a political decision by the Chinese Government officials. If they were denied most-favored-nation treatment by the United States and chose to retaliate against us in the agricultural import area, it could have a significant impact on U.S. export volumes.

Senator COCHRAN. Yes. What would likely be the result?

Mr. MOOS. Well, I think the Chinese economic development will continue to expand demand for food and agricultural products in that country, and they will probably continue to have to go into the world market to meet that demand. If, for political reasons, they decided not to buy from the United States, that means they would have to turn to other exporting countries. Overall, it may not have all that direct an impact on the volume of U.S. agricultural exports if we continue to be in a sellers' market. But if the world supply and demand balance were to shift rapidly from a sellers' market to a buyers' market, it would have a dramatic impact on the export outlook for American agriculture.

Senator COCHRAN. I have a number of questions concerning administration of our farm programs, which I am going to submit for the record.

ELIGIBILITY FOR EMERGENCY LOANS

We are trying to work with other committees in the Congress to resolve some problems that have arisen in connection with the eligibility for emergency loans of some of those farmers who made application to the Farm Service Agency. We are very seriously troubled by some decisions the Department has made in connection with eligibility based on language in the farm bill regarding credit-worthiness or past credit history with the Department of Agriculture.

Some loans have already been approved. There are some in the pipeline. Now a new criteria is being imposed which seems to be unfair and flies in the face of the flexibility contemplated by the farm bill for dealing with the transition to this new program.

We are seriously concerned. Others are, too. We hope that the Department will cooperate and be sensitive to the importance of re-

solving these issues. Understanding that this is a transition, we are trying to adjust to these new definitions.

We would hate to see the Department become so bogged down with a lot of technical, legal problems, real or imagined, with the new law that you end up creating difficulties. We are trying to do our part to help make sure that it works out so that everybody understands it has been a thoughtful and rational process in considering these applications. And we hope you do too.

Mr. MOOS. Mr. Chairman, we are also concerned, and we are looking forward to working with the Congress to provide some flexibility here. We are concerned about the immediate impact and hope that the Congress would act expeditiously to provide a grace period to allow this situation to be reexamined, and to make whatever changes are required to provide an adequate safety net for those American farmer-borrowers who are dependent upon this program.

OICD REORGANIZATION INTO FAS

Senator COCHRAN. In the Foreign Agricultural Service area, as well as the Farm Service area, there has been an impact because of the reorganization of the Department of Agriculture. There have been a lot of changes.

I know OICD used to be the Office of International Cooperation and Development. I suppose that transition has given FAS all that responsibility. Has that worked out so that the programs administered by OICD are continuing to function, or what—

Mr. MOOS. I am going to—

Senator COCHRAN. What are the budget limitations, or problems they encountered, if any?

Mr. MOOS. I will turn to our Administrator of the Foreign Agricultural Service for a comment in that regard.

But from my perspective, as being responsible for the overall mission area, I am growing more and more comfortable with the reorganization as we have incorporated the OICD into the Foreign Agricultural Service.

And we have been engaged in further reorganization as we have consolidated some of the administrative management functions of the Foreign Agricultural Service and the Farm Service Agency into an overall effort for this mission area.

So we have had some growing pains, and we have seen some anxiety by the personnel within the ICD area. We are looking at similar kinds of problems as we continue with the rest of our reorganization. We recognize that there are sensitivities here, as regards people's concern about their future. And it will be no simple task, now, to break out the risk management function from the Farm Service Agency and reestablish it as a separate agency.

So we ask the forbearance of the Congress, and particularly your subcommittee, Mr. Chairman, as well as your concern and focus on this issue to help us to work our way through it.

Now, I would like to turn to Mr. Schumacher.

Mr. SCHUMACHER. Briefly, Mr. Chairman, I think the FAS and OICD merger is working much better for three reasons.

First, one-half of our export growth is coming in those developing countries where ICD has been very active, working with AID and

the World Bank and other groups. In Indonesia, China, and Russia, for example, where growth has been very strong in a number of products, the Cochran program is working very well with the Emerging Markets Program. We are trying to work more closely with the USAID, so we have more of an integrated strategy, particularly with our new long-term agricultural trade strategy.

Second, we have a Partnership Council chaired by our General Sales Manager, Chris Goldthwait, who is sitting behind us, that has worked with our staff to resolve some of the difficult personnel issues. There are two different personnel systems, and we are trying to merge and integrate those a bit more smoothly and have exchanges of staff.

And third, we are going to really work very hard to make sure that all people can move backward and forward between the ICD and FAS in the future, particularly as we look at our Washington placement plan. So it has gone, I think, more smoothly than some people had expected.

Senator COCHRAN. I am encouraged by your comments and by the comments the Secretary made about these programs and the functions of these agencies within the Department.

It seems to me that together with the Cooperator Program we have the tools to really see dramatic improvements in relationships around the world fostered by agricultural trade and agribusiness trade.

The future does look very bright. I think we are positioned better than any other country to take advantage of these opening market opportunities and changes in governments and market programs in other countries around the world.

We have a very productive and progressive production and exporting capability. I just hope that our Government can continue to recognize the importance of working in a cooperative way with our private sector to take full advantage of these new opportunities and to be a facilitator and a supporter and a defender of American interests around the world, so that we can realize fully our potential in this area.

I think we have done a good job, and I do not want to see that changed by any difficulties in the organization or by any effort by the Department of Agriculture or other Federal departments or agencies.

COMPETITIVE CRITERIA IN THE COOPERATOR PROGRAM

In connection with the Foreign Cooperator Program, I know the budget proposes additions to the appropriations level. I am generally supportive of that, but I understand that the funds will be awarded on a competitive basis.

What is this? Is this a new criteria that you will use to decide who is eligible to benefit from this program? How is that actually going to work in comparison to the way awards have been made previously?

Mr. MOOS. Mr. Chairman, beginning in fiscal year 1997, we will be awarding at least a portion of the funds available for the Cooperator Program on a competitive basis. We are currently developing the criteria to do this. It is going to take us some time as we work with the program participants to develop that kind of criteria.

We consider our Cooperator Program to be one of our most successful export promotion tools, and we want to continue that program, and to give the cooperators the scope that they need to be able to take advantage of the opportunities out there. But we recognize that the resources are limited. We are not interested in making it more complicated, if you will, for the cooperators to qualify in this partnership between the public and private sector.

Senator COCHRAN. What is going to be the effect of the new rule in terms of whether there will be delays or disruptions or any slowdown in the work of the Cooperator Program?

Mr. MOOS. We hope that we will be able to establish the criteria and put them in place without disrupting the program.

COOPERATOR PROGRAM COST SHARING

Senator COCHRAN. What about the cost-sharing arrangements that currently exist and what additional cost sharing will be required of cooperators in the collocation of selected foreign market cooperators?

Mr. MOOS. The Cooperator Program does require cost sharing from the participating institutions, and at a significant level. So we need to, again, work with these cooperator groups in developing the criteria for competitive allocations. We do not want to be a drag on their ability to develop our markets and promote their products overseas. Our efforts will be aimed at making their programs work more effectively and getting a bigger bang out of the buck in terms of the taxpayer dollar.

Senator COCHRAN. Does that mean there will be additional cost sharing required compared with what's now required?

Mr. MOOS. It is too early to judge that, but I would hope that that would not be the case. The Cooperator Program already requires a much greater cost-sharing responsibility than, for instance, our new Market Access Program.

EXPORT SUBSIDY PROGRAMS

Senator COCHRAN. There are export subsidy programs, one that affects the dairy industry—the Dairy Export Incentive Program. There is the Sunflower and Cottonseed Oil Assistance Programs and also an Export Enhancement Program.

The testimony that you have submitted indicates that for fiscal year 1997, the budget will provide the maximum levels for these subsidy programs, consistent with the quantity and expenditure reduction commitments required under the terms of the Uruguay Round Agreement on agriculture.

I would like to have, for the record, the specific levels proposed in the budget for each of these subsidy programs for 1997. You may have those now. Are they determined, or is this going to be a continuing determination as the year goes along?

Mr. MOOS. No, Mr. Chairman; the FAIR Act sets a limit on how much money can be spent for the support of these various programs. And, of course, it doesn't relate directly to what is authorized under the Uruguay Round Agreement. It is more a function of budgetary concerns, capping the amount of resources available to those programs at \$350 million for fiscal year 1996 and \$250 million for fiscal year 1997.

That compares to a Uruguay Round authorization for the United States to spend up to \$881.6 million on these efforts in fiscal year 1997. The funding levels authorized by the FAIR Act for the out-years 1998 through 2002 are somewhat higher than the first 2 years, but still they are below the level that would be allowed by the Uruguay Round Agreement.

EXPORT PROGRAM ESTIMATED FUNDING LEVELS

Senator COCHRAN. It would be helpful, too, if you could tell us—and you may submit this for the record—the total amount of bonus awards you expect to make under each of these programs for this current fiscal year. I know that given the—

Mr. MOOS. Well, in this current fiscal year, it is a little difficult to estimate that. However, I would not expect it to be much higher than it is today.

And so far as I recall, we spent about \$20 million on the Dairy Export Promotion Program, and about one-half of that amount on the other programs, including the Export Enhancement Program.

If the sellers' market continues in the world for agricultural products, we would assume that there would be little need for direct subsidy to put our products competitively into the world market.

Senator COCHRAN. Is that also true for the Sunflower and Cottonseed Oil Assistance Programs? Did you include that with EEP for that \$10 million estimate? If you could—

Mr. MOOS. We can break that out for you.

Senator COCHRAN. Break that down for each of the three programs, it would be helpful to us. You might give us a call on that, if you could.

Mr. MOOS. We will be happy to do that.

Senator COCHRAN. Thank you.

[The information follows:]

Fiscal year 1996 bonus awards

<i>Program</i>	<i>Estimated bonus award</i>
Export Enhancement Program	\$5,153,000
Sunflower Oil Assistance Program	
Cottonseed Oil Assistance Program	

COST OF FARM PROGRAMS

Senator COCHRAN. There was a question that Senator Bumpers asked that I misunderstood the answer to, I think. In connection with the downward trend in the farm program payments that will be made under the new farm bill, I got the impression that they were going to go from \$5 or \$6 billion a year down to \$1 billion a year. That is not right.

Mr. MOOS. No; I think what Mr. Buntrock said was that they started out at about \$5.5 billion and gradually reduced to a little over \$4 billion at the end of that period, for a reduction of a little over \$1 billion over the 7 years.

Mr. BUNTROCK. Seven years, that is right.

Senator COCHRAN. OK. I have some additional questions, which I am going to submit for the record and ask that you respond to them as soon as is reasonable.

RISK MANAGEMENT

I cannot help but be in suspense over what Mr. Ackerman is going to be doing after today, or whenever. [Laughter.]

I am tempted to ask him to tell us, but I am not going to ask him. We will just stay tuned, I guess.

Well, I wish you well in whatever new thing you are about to do, if you are about to do it.

Mr. ACKERMAN. I appreciate it. [Laughter.]

Senator COCHRAN. Well, I am——

Mr. MOOS. Mr. Chairman.

Senator COCHRAN. Yes, sir.

Mr. MOOS. If I might, at that point, just comment that we think that the new Risk Management Agency will be a very, very important agency to the future interest of American agriculture, because as we move more away from our price and income support programs to provide an adequate safety net for American farmers, we are going to have to look at the ways of helping them to assume more risk management responsibilities. And so I am looking forward as well to the development of programs under the new Risk Management Agency. And I can assure you that Secretary Glickman is also very strongly focused on this particular subject and that he looks to the Risk Management Agency to fill the gap, as there is a need for a continuing safety net for American agriculture.

Senator COCHRAN. Thank you very much. I share that interest as well. I was suspicious, and almost cynical when the administration unveiled its earlier crop insurance, catastrophic crop insurance program, and promised farmers that they would be taken care of for \$50. That is, with a premium of \$50 you would be able to have an insurance program that would do away with the need for disaster assistance.

I know that was not exactly what was promised, but that was the headline, you know. And the details following it—it was just like almost any other insurance policy you get. You have to read the fine print. You have to look at all these but-ifs, you know, that are added on at the end.

I think there is a good bit of suspicion out there that the Government has overpromised in so many areas, it cannot possibly deliver what the farmers expect.

So whatever comes of this, I hope it can be straightforward, and care can be taken to spell it all out so that everybody understands what the realities are. And we assure you we will work to establish a fair program, and one that is sensitive to the budget realities and also the problems that many farmers are going to have in dealing with the ravages of disasters that can come out of nowhere and jeopardize one of our great assets—our agricultural productivity and our agricultural resources.

If we could, I would like to hear our soon-to-be new administrator comment on that. [Laughter.]

Mr. Ackerman?

Mr. ACKERMAN. Mr. Chairman, I would just comment that we gained quite a lot of experience this year under the new program,

with the catastrophic coverage under the Federal Crop Insurance Reform Act.

As you say, catastrophic coverage for \$50 was a very low level of coverage, designed to substitute for disaster payments. I think one of the things that we have learned is that for most producers, higher levels of coverage are better and probably what they are going to need.

As we look forward, one of the first things that this office will need to do is to think through and talk through and strategize how to offer producers the choices that they need, and how to make sure they understand the choices so that when a disaster strikes, or when losses occur, people know what they have and are not caught by surprise by their insurance policies, as well as the weather.

Senator COCHRAN. We went through this with other disasters, when hurricanes and other weather-related disasters would strike.

And, I recall when we wrote that first Disaster Assistance Program that was going to be a substitute for all the ad hoc programs that had been customarily enacted after each big storm, or big flood, or big hurricane came along.

I think over time, that has begun to work, to finally take hold and work, although there is always a temptation. And this administration has fallen into it, too, you know.

The earthquake in California was so different and so much bigger than anybody had ever anticipated would happen. So you come in with new programs, new requests, go out there a lot and present new goodies from the Federal Government. People see that, and then you have another similar type of disaster, and people compare the results they saw from the Government in their area, and say, "Well, look what all happened in California."

So it is a difficult and challenging thing to stick with a disaster program. And we will continue to work to try to deal with that as a problem that does need attention and needs a solution.

Well, that is enough of this. You all have been very helpful to us, and you have been very patient with our questions.

Senator Burns was here earlier, as you all know, and he had a number of questions, but had to leave for another hearing he had to chair, the Small Business Committee, and he asked me to ask some of the questions.

SUBMITTED QUESTIONS

I hope that you will look at the questions that are submitted by Senator Burns, and give prompt responses to them. And, if there are any that require response expeditiously, I hope you will respond in that way to him.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

FARM SERVICE AGENCY
QUESTIONS SUBMITTED BY SENATOR COCHRAN
CROP INSURANCE

Question. During fiscal year 1995, it is my understanding that the Federal Crop Insurance Corporation transferred \$4.7 million to the Farm Service Agency to cover the start-up and development costs of the Noninsured Assistance Program (NAP). Has the FCIC transferred any funds to the FSA during fiscal year 1996?

Answer. The FCIC has not transferred any funds to the FSA during FY 1996 for start-up and development costs of NAP, nor are any such transfers anticipated.

Question. Do you intend to do so to implement the new farm bill provisions?

Answer. No. The FAIR Act places the administration and operation of the Noninsured Crop Assistance Program in the FSA. The FAIR Act further provides that funds of the Commodity Credit Corporation shall be used to carry out this program.

Question. The new farm bill provides for the withdrawal of FSA delivery of catastrophic crop insurance coverage from certain areas, as determined by the Secretary. In a written response to this subcommittee in the FY 96 hearings, the Department stated that the cost of delivery for catastrophic coverage by the FSA was \$45.2 million. However, when asked if the FSA would incur any savings from the withdrawal of catastrophic coverage, in a written response the Department testified that the \$50 fee charged producers would cover delivery costs, therefore, no savings would result from the elimination of FSA delivery of catastrophic coverage. The farm bill also eliminated the mandate that farmers who participate in commodity programs must purchase crop insurance. Will the combination of the catastrophic coverage delivery and mandatory purchase provisions of the new farm bill provide for any savings to FSA?

Answer. We were about halfway into the fiscal year at the time of our 1996 hearings last year, and FSA was just beginning to sell catastrophic policies when we stated that the \$50 fee would essentially cover our costs. Since that time, we have completed the first sales year, and for FY 1995 our costs were very close to the \$45.2 million we estimated, or \$47.6 million. However, the fees collected that could be applied to our FSA costs, after allowing for collections that the Federal Crop Insurance Reform Act provided be retained by the FCIC Fund, were only \$36 million. The Agency was therefore required to absorb about \$11.6 million. For fiscal years 1996 and 1997, under provisions of the new farm bill, we again expect to absorb similar amounts, although total

costs and collections will both be at lower levels due to the withdrawal of catastrophic sales in certain States and producers' ability to waive coverage.

IMPACT OF ELIMINATION OF MANDATORY COVERAGE

Question. Will the elimination of mandatory coverage affect the loss ratio?

Answer. We do not anticipate any measurable impact when the loss ratio is averaged over several years. FCIC has been taking actions to achieve a loss ratio that complies with the law; it will continue those actions. However, the first year of experience under the 1994 Federal Crop Insurance Reform Act indicates that widespread CAT coverage does have a favorable effect on overall program loss ratios.

Question. What is the loss ratio expected to be for FY 96?

Answer. The budget for FY 1996 contained an assumption that the loss ratio for the 1996 crops would be 1.10. Presently, the winter wheat crop is in poor condition, suggesting that losses on this crop may be heavy. Losses have occurred on peaches and other crops in the southeastern States. However, planting is just underway for the major spring crops such as corn, soybeans, cotton, etc. Projecting the potential losses on any crop is impossible at this date, especially for the crops just now being planted.

Question. Do you anticipate that the elimination of mandatory coverage will have any effect on the estimates for reimbursements to private insurance companies for delivery expenses?

Answer. There is little reason to assume that many farmers now insured at the buy-up level with private insurance companies will choose to waive out of the crop insurance program. As a result, significant impact on delivery expense payments to the private companies is unlikely.

Question. What are your revised projections for these reimbursements for FY 97 and FY 98?

Answer. Since we anticipate no substantive changes in participation at the additional coverage levels, we do not believe that we need to revise the projected reimbursements for FY 1997 and FY 1998. A more important test, we believe, will be the market penetration achieved by commercial insurance companies in FY 1996. Sales of additional coverage levels in FY 1995 were below expectations. We attribute this to lack of time to acquaint producers with the new programs due to the late date of passage of the Federal Crop Insurance Reform Act. FCIC made special efforts to ensure that all information for sales in 1996 was issued timely. If sales at additional coverage levels again fail

to achieve expectations, some adjustment of projections for future years may be in order.

FARM CREDIT

Question. The budget proposes the elimination of the emergency loan program. The reason for this elimination is that most of the loans have been used for crop losses, which are now covered by crop insurance. In cases such as in Mississippi last year, when farmers were under the impression that the catastrophic coverage was equal to previous disaster provisions, the Emergency Disaster Loans were the only additional source of assistance to these farmers. You are proposing to eliminate these loans and indicate in your prepared statement that these farmers can receive assistance under the regular farm operating and ownership loan programs, but it is my understanding that these programs have significant application backlogs. What would happen to a farmer in this situation?

Answer. FSA anticipates having sufficient direct and guaranteed operating and farm ownership loan funds to assist family size farmers and ranchers in FY 1997. FSA experienced a reduction in the number of applications carried over from FY 1995 to FY 1996 in the direct operating program. With passage of the FAIR Act, FSA anticipates even fewer applications being carried over from fiscal year to fiscal year in the direct operating and farm ownership programs. The low interest rate (5 percent) available under the limited resource provisions of the direct operating and direct farm ownership programs helps family farmers in the economic recovery of farming operations affected by a natural disaster.

Question. The Emergency Disaster Loan program is a direct loan program. However, the President's budget proposes cuts of 32% and 23% in direct farm ownership and direct farm operating loans, respectively. How can you absorb these cuts while adding the burden of emergency disaster loans to these programs?

Answer. Based upon the President's FY 1997 budget, FSA anticipates having sufficient direct and guaranteed operating funding available in FY 1997. The FAIR Act will reduce the number of eligible direct loan applicants (former borrowers who apply after April 4, 1996, and have had debt forgiveness are no longer eligible) and guaranteed operating funding available in FY 1997. Additional funding will be available for direct farm ownership applicants due to the FAIR Act's interprogram transfer provisions. When available, unused guaranteed operating funds will be transferred to the direct farm ownership loan program near the end of each fiscal year. This transfer authority will not totally offset the reduction in direct farm ownership funds, but will help meet some funding demands.

In addition, FSA will place emphasis on using the guaranteed loan programs as a safety net for farmers impacted by a disaster. The guaranteed loan program will allow these farmers to maintain their relationship with their commercial lender while helping to relieve some of the risk of the loan due to the impact of the disaster. Use of guaranteed funds in this manner, instead of total reliance on direct funding, is consistent with the market-oriented thrust of the FAIR Act of 1996.

CONSERVATION RESERVE PROGRAM

Question. Mr. Secretary, you mention in your prepared statement that the Department has already published rules regarding the Secretary's action to allow the "early-out" option to those CRP contracts expiring on September 30, 1996. However, you note that the Farm Bill allows farmers to take the "early-out" option on land which has been in the CRP for at least 5 years. Do you have any estimates on how many acres may be removed from the CRP under these two proposals?

Answer. The budget proposal, submitted before enactment of the new Farm Bill, estimated that 1.1 million acres would take an early release from CRP. The impacts of the new Farm Bill, volatile commodity markets, weather conditions, and production inputs will all affect the number of acres being released from CRP. USDA is currently revising the projection on the amount of early release acres based on the new data. In June, USDA will have some preliminary data on the number of acres released as of May 31. This will provide some additional insight as to producers' interests and enable USDA to more accurately project CRP early release acres.

Question. Does the budget include these assumptions, and the associated costs associated with the enrollment of replacement acres?

Answer. The President's FY 1997 budget proposal included a 1.6 million acre enrollment consistent with provisions in the 1996 appropriations act which mandated a 1997 signup in the year beginning January 1, 1997. The Farm Bill legislation repealed this requirement. The program's cost will now be funded by the Commodity Credit Corporation effective with enactment of the Farm Bill.

OPTIONS PILOT PROGRAM

Question. The Options Pilot Program has been in effect for producers of corn, wheat and soybeans. Now that the Farm Bill eliminates the linkage between payments and production, what effect do you anticipate this will have on participation in the Options Pilot Program?

Answer. The FAIR Act reauthorizes a discretionary Options Pilot Program for 1996-2002. We will not offer the Options Pilot Program for 1996. Because of the elimination of the linkage between payments and

production, the Options Pilot Program will need to be reevaluated in subsequent years as to its compatibility with production flexibility contract payments. Producers would not likely forgo guaranteed production flexibility contract payments if they thought that the subsidy for put options premiums would be less. Put options permit producers to sell a specific quantity of their commodity at a price specified in the option. Paying subsidies for put option premiums that were higher than guaranteed production flexibility contract payments would not be budget neutral.

Question. Do you anticipate seeking legislation to expand the Options Pilot Program?

Answer. We do not anticipate seeking any additional legislation at this time. The current legislation gives the Secretary broad discretionary authority to redesign an Options Pilot Program that could potentially be more compatible with production flexibility contracts. We have not yet evaluated all the possible alternative Pilot Programs under existing legislation.

FSA SALARIES AND EXPENSES

Question. The budget request includes an increase of \$101 million for FSA salaries and expenses. However, \$75 million of this is for the reimbursements to private crop insurance companies for certain delivery expenses, which the prepared testimony notes was covered in the Farm Bill. With the \$75 million covered under mandatory spending, this leaves a \$26 million increase that is being requested for FSA salaries and expenses. Do you expect additional modifications to be made to this request?

Answer. Yes, the requirements of the new Farm Bill necessitate an adjustment to the FSA budget for salaries and expenses and its staff years, since a separate budget must be developed for the new Risk Management Agency. Some portion of the funds and staff years requested for FSA in FY 1997 will need to be redirected to the new agency. We will keep the Committee apprised as we examine the legislation and consider its effects on the FSA budget and on the new budget of the Risk Management Agency.

Question. Do you expect that total personnel requirements may decrease as a result of the Farm Bill, yielding additional savings?

Answer. We are working rapidly to assess Farm Bill impacts on workload. Major workload areas such as producer signup, maintenance of basic farm records, and acreage reporting requirements will be affected by policy decisions to be made pursuant to the FAIR Act. We anticipate a decrease in staffing needs for these areas, to be partially offset by some increase in workload for EQIP implementation associated with FSA responsibilities regarding program delivery. There also will be

some increased workload for the conservation title in general. We expect the net decrease to be significant enough to require personnel adjustments of Federal and county employees across the Agency, compared to FY 1996 levels.

Question. It is my understanding that the FSA has had staff to certify plantings, begun taking aerial photographs, and perform other activities that were integral to the operation of the old commodity programs, but really are not necessary under the new Farm Bill. Do you intend to end such practices?

Answer. As a result of the FAIR Act, county office operations are undoubtedly going to change; however, it appears that there will continue to be a need for certain activities that have historically been performed by county offices. Until program details are finalized, we cannot identify exactly what practices and operations will be discontinued by county offices.

Question. How much will this save?

Answer. We anticipate that the FAIR Act will result in a decrease in county and Federal office workload, but we are currently analyzing the budget impacts and are not yet able to provide any estimates. The Department will keep the Committee advised of these impacts when they are fully assessed.

Question. The Salaries and Expenses account also includes an increase of \$1.4 million for modifications and upgrades of the systems supporting farm credit program delivery. Please explain the necessary modifications and upgrades.

Answer. The modifications and enhancements of program delivery systems are required to ensure customer service and to meet legislative requirements. It is critical that these farm credit program operations be effectively absorbed and maintained by FSA. These software upgrades and modifications will improve system design and performance and will include the existing Debt and Loan Restructuring System (DALR\$) database, screens, and reports to meet the requirements of the FAIR Act; modify and enhance the Management Record System (MRS) to allow for the downloading, posting, and updating of farm credit program payments; enhance the Farm and Home Plan System (FHP) to provide five-year line-of-credit planning and tracking; enhance and expand the Farm Automated Record Management System (FARMS); modify and upgrade the AGCREDIT system to meet management reporting requirements; and enhance existing appraisal software to allow data imaging and electronic data transfer.

Question. How much is projected to be spent for these activities in FY 96?

Answer. FSA projects spending \$0.9 million for modifications and upgrades of farm credit program delivery systems in FY 1996.

Question. If the upgrades include hardware purchases, for those made in FY 96 or proposed for FY 97, what specific circumstances existed or will exist that require the Department to make the acquisitions prior to satisfying expectations set by this Committee with respect to the acquisition of new technology, including completing reengineering; addressing oversight concerns; and developing a Department-wide system architecture?

Answer. Modifications and upgrades to system software will be made by contractors currently assisting USDA with the systems. Reengineering to meet legislative and oversight needs will be completed before any major modifications are begun.

CREDIT SALES OF ACQUIRED PROPERTY

Question. The budget proposes a program level of \$50 million for credit sales of acquired property. Mr. Moos, you mention in your prepared statement that the Department has been at a disadvantage in trying to meet its commitments under current law to give priority in the sale of inventory property to socially disadvantaged and beginning farmers and ranchers. Does the Department not have the ability to make credit sales of inventory property from the regular farm ownership loan program, which gives priority to socially disadvantaged and beginning farmers and ranchers?

Answer. FSA may use direct farm ownership loan funds to finance the sale of inventory property to eligible applicants. However, applicants for direct farm ownership money to purchase an inventory farm would have to await funding along with other direct farm ownership applicants based upon the date the application was received.

Currently the waiting period for direct farm ownership loan funding is 18-24 months. However, changes needed in the direct farm ownership program due to the FAIR Act should reduce this period. The Agency now has authority to lease an inventory farm to beginning farmers for 18 months to enable them to operate their farms while awaiting funding when funds are not available.

Question. Since no separate appropriation was provided for credit sales in FY 96, was the regular farm ownership loan program utilized for this purpose?

Answer. FSA direct farm ownership loan funds were used in FY 1996 to facilitate the sale of a small number of inventory properties.

Question. How many loans were made, and for what amount?

Answer. Data is not currently available to ascertain the number and amount of loans made to finance inventory properties. We are currently extracting this data from Agency records and will provide the data to the Committee when it becomes available.

Question. What was the value of the property shown in the inventory?

Answer. As of April 23, 1996, the current value of the properties in USDA's inventory is \$250,882,779. The value of the properties at the time they were acquired was \$269,170,354.

Question. What is the current value of the property in USDA's inventory?

Answer. As of April 23, 1996, the current value of the properties in USDA's inventory is \$250,882,779.

Question. What was the loan amount against these properties at the time they were taken into inventory?

Answer. The value of the properties at the time they were acquired was \$269,170,354. The following is the principal and interest debt against the properties at the time of acquisition.

Principal.....	\$318,446,902.23
Interest.....	\$149,393,559.94
Total.....	\$467,840,462.17

OUTREACH FOR SOCIALLY DISADVANTAGED FARMERS AND RANCHERS

Question. Mr. Secretary, you mention in your prepared statement that the budget includes \$3 million for the Outreach for Socially Disadvantaged Farmers and Ranchers program. You also state that in support of this request, the Department will submit a report to Congress, as requested in the FY 96 Agriculture Appropriations Act conference report. Since the Department included this funding request in its budget, I assume that you must have some idea of what is contained in this report. Can you give us a preview?

Answer. Yes. This program is authorized under section 2501 of the Food, Agriculture, Conservation, and Trade Act of 1990. The Secretary is empowered to make grants to eligible community-based organizations with demonstrated expertise in providing agricultural education or other agriculture-related services to socially disadvantaged groups. Also eligible are the 1890 land-grant colleges including Tuskegee University, Indian tribal community colleges, post-secondary educational institutions servicing Hispanics, and post-secondary educational institutions having the required expertise.

The overall program goal is to enhance the ability of small and minority producers to operate a farming or ranching enterprise independently and to produce an income adequate to service debts, maintain farm operations, and provide a reasonable standard of living. To accomplish this goal, grant awards are made annually to entities for providing intensive training and management assistance to small farmers or ranchers, particularly minority farmers or ranchers, in selected States. A farm management specialist visits each program participant one to three times a month to provide instruction and technical assistance in the areas of individualized custom farm plans, production and marketing practices, farm accounting, and recordkeeping.

The report will provide detailed information about the program in all areas mentioned above.

Question. When specifically can we expect to receive the report?

Answer. We expect that the report will be released on May 16, 1996.

Question. It is my understanding that the Department has many other programs designed to assist socially disadvantaged farmers and ranchers. Please provide a list of all programs which are designed or include preferences for socially disadvantaged or minority farmers and ranchers. If there is a set-aside in a program, please provide the dollar amount.

Answer. FSA targets portions of the following programs for socially disadvantaged farmers and ranchers. The dollar amount targeted in each loan program in FY 1996 is provided:

Direct Operating	\$65,146,000
Guaranteed Operating	\$215,386,000
Direct Farm Ownership	\$14,124,000
Guaranteed Farm Ownership	<u>\$98,601,000</u>
	\$393,257,000

DAIRY INDEMNITY PROGRAM

Question. The budget requests \$100,000 for the Dairy Indemnity Program for FY 97. How much of the FY 96 appropriation has been obligated to date?

Answer. Carryover fund balances from FY 1995, as well as the 1996 appropriation, are available for obligation needs of the program. The estimate in the 1997 budget is that approximately \$400,237 will be obligated for claims in FY 1996. As of April 23, \$183,193 has been obligated for this program.

Question. What is the current balance in this account?

Answer. As of April 23, \$217,044 in remaining unobligated funds is available to respond to dairy claims.

HAZARDOUS WASTE MANAGEMENT

Question. Mr. Buntrock, you mention in your prepared statement that there are two proposed changes in the statutory language proposed for the Commodity Credit Corporation. One of these is a new \$600,000 private water well testing initiative requested by the Environmental Protection Agency. What does this have to do with the operation of the Commodity Credit Corporation?

Answer. During the 1930's through the early 1970's, the CCC operated a grain storage program in approximately 4,000 communities in the United States. The facilities were predominately located in rural communities in the Midwest. At that time, a mixture containing carbon tetrachloride (CT), a hazardous substance, was commonly used to control fungus on stored grain. During the 1980's, CT was identified in some water supplies around former CCC facilities in Kansas and Nebraska. The CCC immediately implemented measures to ensure that individuals were supplied safe water when CT was above the maximum contaminant level as determined by EPA near former CCC facilities.

Most of the previous sampling efforts have been associated with communities with public water supplies that are required to submit quarterly water sampling results under the Safe Drinking Water Act. Many of the former CCC facilities are surrounded by households that depend on individual wells for their water supply. Neither the State nor EPA requires water sampling of private water supplies. CCC would use the requested funds of \$600,000 to jointly work with EPA and State agencies to test private wells around former CCC facilities and to assess potential public health impacts of the former CCC operations. The CCC, along with EPA and the Nebraska and Kansas departments of public health, will develop and implement a private well testing initiative to ensure the protection of public health. In some very limited testing done in the past, approximately 15 percent of the private wells around former CCC facilities had CT.

Question. If this is requested by the EPA, why is it not included in its budget?

Answer. This is a particular priority for CCC. EPA has many additional priorities to address. CCC has recently requested that either the EPA or the States conduct this investigation, but neither of the parties have had the resources to implement a thorough and extensive investigation of all private wells around former CCC facilities. CCC views this investigation as a prudent measure to ensure the protection of public

health; however, neither EPA, Kansas, nor Nebraska has provided any statutory or regulatory basis requiring CCC to perform this testing.

Question. What is the justification of this request?

Answer. The CCC would use these funds to conduct an extensive private well testing initiative around former CCC facilities to ensure the protection of public health and to assess future site investigation priorities.

In a small sampling of some private wells in Nebraska, approximately 15 percent of the indicated private wells near former CCC storage sites had CT contamination. CCC proposes to develop, with assistance from EPA and appropriate State agencies, a testing program that will ensure the protection of public health. CCC will take all necessary corrective actions to protect public health if sample results indicate that action is warranted.

AGRICULTURAL CONSERVATION PROGRAM

Question. The Farm Bill establishes a new program, the Environmental Quality Incentives Program, which combines the Agricultural Conservation Program, the Water Quality Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. Does the Department intend to continue to obligate funds under the Agricultural Conservation Program until the regulations are in place for the Environmental Quality Incentives Program, or hold those funds until the new regulations are in place?

Answer. We intend to use the FAIR Act interim authority to continue obligating any remaining ACP funds and interim EQIP funds until September 30, 1996.

Question. Does the new law repeal the authority for the Agricultural Conservation Program?

Answer. Yes. The ACP authorizing language was repealed effective upon enactment. However, Congress provided for interim authority to continue to use ACP funds for EQIP objectives until the permanent EQIP is established (up to 180 days after enactment).

PRODUCTION FLEXIBILITY CONTRACT PAYMENTS

Question. One of the requirements for a farm to remain eligible for contract payments is to maintain the land in an agricultural use. Does USDA intend to develop a definition of agricultural use or does one already exist?

Answer. We are providing guidance to the county FSA committees for determining agricultural use and non-agricultural use.

Question. If possible, please provide the definition that might be used.

Answer. Examples of agricultural use are land meeting the cropland definition; farm ponds; sod; aquaculture ponds; nursery acreage devoted to in-ground plants; wildlife habitats; pasture; and trees planted for harvest, conservation purposes, or recreational uses.

Examples of non-agricultural use are land uses for commercial development, strip mines, golf courses, and other recreational facilities.

Question. Will land enrolled in CRP and planted to trees be eligible to be enrolled in a production flexibility contract and qualify as being in an agricultural use without removing the trees?

Answer. Yes. Trees are considered an agricultural use.

Question. According to various reports a producer will be able to enroll a portion of the farm's base acreage in a production flexibility contract. In most other cases the entire farm is not contract acres. If a producer subsequently sells or transfers a portion of the farm, will he or she be allowed to designate how many contract and non-contract acres are being sold or transferred?

Answer. Yes, the designation-by-landowner method of division may be used to designate how the contract and non-contract acres are divided when a farm or part of a farm is sold or transferred. The parent farm owner and the purchaser or transferee must sign a memorandum of understanding designating the division of the parent farm's contract acres.

Question. Can the sale or transfer involve only contract or non-contract acres?

Answer. Yes, by using the landowner method of division outlined above.

Question. If a portion of a farm enrolled in a contract is developed for non-agricultural use and that farm has non-contract acres, can the land developed be designated as the non-contract acres to retain eligibility for future contract payments?

Answer. Yes. Producers remain eligible for payment as long as an amount of acreage equal to the contract acreage is maintained for agricultural use.

Question. Will landlord-tenant arrangements have to be written or will USDA allow continued use of verbal agreements for farms covered by a contract?

Answer. USDA will continue to honor verbal leases.

Question. Will the oral agreement be sufficient for distribution of payments?

Answer. Yes. However, USDA will review contract payment shares agreed to by all producers to ensure that the tenants' rights have not been violated.

Question. Will landlords who lease their land to a tenant for cash be allowed to receive the contract payment?

Answer. No. The statute provides that an owner must share in the risk of production. A cash-lease landlord does not meet that criterion.

Question. Will landlords who lease their land on a share-rent arrangement be allowed to receive 100% of the contract payment?

Answer. No, since the landlord does not assume all the risk of production in this case.

Question. If, by mutual agreement, the cropping pattern of a farm is different in '96 or subsequent years and the landlord and tenant therefore adjust the terms of a share-rent agreement, will USDA play any role in determining how the contract payments are shared?

Answer. USDA's only role will be to determine that the rights of landlords and tenants are protected and that payment limitation provisions are not evaded.

Question. If a landlord adds a new cash-rent tenant on a portion of a farm and the tenant produces a crop not previously produced on the farm, will the landlord have to designate a share of the contract payment to go to the new tenant?

Answer. If only a portion of the farm is cash-leased, the owner and all tenants will determine how payments will be divided. Their decision will be approved unless the county committee determines that landlord/tenant provisions have been violated or payment limitation provisions have been evaded.

Question. Will the new tenant have to be listed on the contract?

Answer. The new tenant will be listed on the contract only if he or she shares in the payments.

Question. If a producer decides to utilize the early out option for a CRP contract, for land with a CAB, prior to May 31, 1996, does that producer receive a prorated '96 CRP rental payment and a '96 contract payment?

Answer. Yes.

Question. If a producer received a '95 advance deficiency payment for a crop on a farm but a new tenant farms the same land for '96, does the new tenant have to repay the unearned '96 advance from his or her '96 or '97 contract payment?

Answer. No, the new tenant will not be responsible for the 1995 debt of another producer for deficiency payments.

Question. Please explain how unearned '95 advance deficiency payments will be repaid by producers. If the repayment method or schedule is different for different crops, please explain how the system will work for each crop and why there are differences.

Answer. The 1995 advance deficiency overpayments for wheat, barley, oats, and upland cotton will be offset from the 1996 final production flexibility contract (PFC) payment if they have not been repaid previously. The 1995 advance deficiency overpayments for corn and grain sorghum will be offset from the 1997 advance PFC payment if they have not been repaid previously. Because corn and grain sorghum overpayments are not due until October 1, 1996, they will not be taken until the 1997 advance PFC payments are issued.

Question. How will USDA decide whether a tenant/landlord agreement for '96 is acceptable and payments distributed accordingly?

Answer. County committees will consider cropping patterns, prior agreements on the farm, share agreements on other farms in the area, and other factors necessary to ensure that landlord/tenant violations have not occurred.

Question. How will USDA resolve disputes between tenants and landlords relative to contracts not found acceptable?

Answer. County committees will serve as arbitrators and provide suggestions to owners and tenants.

Question. Are there any circumstances in which failure to resolve a disagreement between a tenant(s) and landlord could result in an otherwise eligible farm not being enrolled in a contract?

Answer. Any owner or tenant on the farm will be allowed to enroll the farm to meet the deadline. Payments will be withheld for the farm until all producers sharing in the payments sign the contract.

Question. The legislation specifically retains the current definition of "person" for payment eligibility purposes. Do you anticipate any changes in the procedures used to determine if a "person" is actively engaged in farming?

Answer. No significant changes are anticipated other than indicated in the response to the next question.

Question. If a "person" is determined to be actively engaged for 1996 will that "person" have to have his or her status determined in subsequent years?

Answer. No. We will require producers enrolling a farm in a production flexibility contract to file or update a farm operating plan for payment eligibility review (CCC-502) for 1996. The producer will not be required to file or update a farm operating plan for subsequent years unless a change occurs in the farming operation which would impact the "person" or payment eligibility determination.

Question. Can farms with contract acres be combined with farms without acres after August 1, 1996?

Answer. In general, no, however, an exception may be made for tobacco and peanut farms.

Question. Will farms with tobacco and peanut allotments and quotas be treated differently?

Answer. An exception to permit a combination of a farm containing contract acres with a farm without contract acres is being discussed.

Question. Will USDA require acreage planted to crops be certified in 1996 and beyond?

Answer. For production flexibility contracts, we will only require producers to report the acreage of fruits and vegetables planted for harvest on a participating farm. Tobacco (except burley) and peanut acreages must be reported. Producers will not be required to report other crops unless they want to be eligible for possible benefits for the crop under the Noninsured Crop Disaster Assistance Program (NAP) or intend to request loans or loan deficiency payments for the crop (reported at any time before harvest).

Question. If a farm with contract acreage is sold or leased to more "persons" eligible to receive payments in 1996 or beyond than received payments in 1995 on the same farm, will USDA allow the addition of "persons" provided they meet the actively-engaged-in-farming and other criteria?

Answer. Yes, as long as all criteria are met, including the substantive change requirement.

Question. A producer is allowed to designate different dates for the receipt of advance contract payments each fiscal year. This could have important tax implications. Has IRS been advised that this is an option under the structure?

Answer. USDA has not advised IRS.

LOAN SERVICING

Question. I note that the Rural Housing Service is developing a new loan servicing system. Could this system be utilized to service farm ownership and production loans?

Answer. The central servicing system being developed by Rural Housing Service for Rural Housing (RH) loans could not be adopted for FSA Farm Credit Program (FCP) loans. Usually, RH borrowers only have one RH loan with a house and lot for security. They have a regular monthly payment that is usually paid with income from wages. Servicing is much simpler for an RH loan.

Question. If not, why not? If so, what steps have been taken to utilize this new system?

Answer. Farm credit borrowers have a number of different loan types, including emergency loans, farm ownership loans, operating loans for annual expenses, and operating loans for the purchase of capital items such as livestock and equipment. Usually, payments are made on an annual basis or on an irregular basis when crop or livestock income is available. Sometimes partial payments are made during the year. Often the payment is made by check and must be split for payment on several different loans. The FSA credit officer must decide how the proceeds will be applied based on the lien position of the security and the input from the borrower.

In many cases, FSA has an assignment on the sale proceeds from normal income security, and when more than one borrower is involved, the purchaser will write only one check for the total. This is true when dairy assignments are taken as security. It is essential that the county office notify the finance office of how much of the total check should be applied to each borrower's account and identify the appropriate loan to receive credit when a borrower has more than one loan.

The FSA security must be appraised to make sure the borrower is obtaining the fair market value when it is sold. Often a borrower needs proceeds released from the sale of total income security to pay essential operating and family living expenses. Such releases are required by the

Consolidated Farm and Rural Development Act. The FSA credit officer must approve the release of a lien on security when it is sold. The use of the sale proceeds, if not applied to the account, must also be approved by the FSA credit officer in accordance with the borrower's plan of operation revised credit program.

Many borrowers require assistance in planning the year's operation. At this planning stage, an agreement is made with the FSA credit officer and with the borrower on the use of the planned farm income. Conditions during the year may change and that would affect the proposed plan. In this case, the credit officer and the borrower must work together and revise the farm and home plan accordingly.

FSA credit officers are required to inspect crops, livestock, and other types of security to see that the Government's interest is protected. These security inspections are required on a regular basis. During that time, appraisals may be conducted to complete a servicing action that may be necessary in the near future or when a subsequent loan is needed.

To remove or limit servicing of an account that requires close contact between the credit officer and the borrower is very risky. Even the private sector continues to service all farm loans from an office easily assessable by the farmer. It is essential that the farmer and his/her credit officer develop a good business relationship built on trust if the farmer is to maximize profits and pay debts.

The central servicing system developed for RH loans does not provide FSA with the tools it needs to service farm credit loans. The system in question also does not provide the farmer with the service he/she needs to operate a farming business. Farmers depend on their credit officers and need that close working relationship to be successful as well as to protect the Government's interest.

The current statute requires FSA to provide each borrower with "supervision" to ensure borrower success. Without this close working relationship, FSA cannot provide the borrowers with a supervised credit program. Also, because many of these farmers have limited resources, their success would be impossible without close supervision.

Question. Are there savings that will or could be realized from the utilization of this system?

Answer. No savings will be realized because this proposed system cannot be used for farm credit loans.

QUESTIONS SUBMITTED BY SENATOR GORTON

ENVIRONMENTAL QUALITY INCENTIVE PROGRAM

Question. What department(s) within USDA will be administering the Environmental Quality Incentive Program (EQIP), a new entitlement program created in the 1996 Farm Bill?

Answer. We expect Secretary Glickman to designate NRCS as having primary responsibility for setting conservation policy for most conservation programs, in particular EQIP. We expect him to direct NRCS and FSA to jointly develop a system using to the fullest extent possible each agency's network of State, county, and local officials to assist in program delivery. NRCS will consult with other Department agencies as appropriate. FSA will continue to play a leading role in delivering the program.

Question. How will your department be working with the other departments to implement this new mandatory program?

Answer. We expect that NRCS will be collaborating and working closely with other agencies, especially FSA, to deliver EQIP. The State and county FSA committee system will play an integral role as will the local conservation district. As members of the State Technical Committee, FSA and NRCS are prepared to continue partnering with other agencies, farm, commodity, conservation, and environmental groups to deliver a sound, viable, and cost-effective program. For example, FSA is currently involved with the implementation of the USDA Interagency Sustainable Agriculture Initiative. FSA is available to use its expertise in delivering conservation programs to focus EQIP funds to obtain the maximum environmental benefit.

Question. Do you feel that the NRCS has the capability to implement this program by itself, or rather should responsibilities be split between say, the Farm Service Agency (FSA) and the NRCS?

Answer. NRCS and FSA should look at the dynamics of each agency and utilize these to the fullest extent to deliver EQIP effectively. NRCS has a strong educational, public affairs, and technical background and an effective working relationship with local conservation districts. FSA has an efficient delivery system in place, a majority of production agriculture clientele, and the State and county committee system. The working structure of the past 60 years between both agencies should serve as a model to help maximize environmental benefits while achieving results on the land at a reasonable administrative cost.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

TOBACCO

Question. Last year several issues related to USDA's expenditures for the tobacco program came up during House and Senate floor debate. Please provide the Committee with a detailed breakdown by agency, function, FTE's, and costs related to the tobacco program since 1992 and those estimated for this FY under the FAIR Act of 1996.

Answer. The following tables provides a detailed breakdown by agency, function, estimated staff years, and costs related to tobacco program activities since FY 1992, including those estimates for FY 1997 under the FAIR Act. However, due to the manner in which the various agencies' workload measurement data are collected and maintained, precise measures of staff years (FTE's) for tobacco-related activities are not routinely maintained for all programs. The staff years that are provided in the information that follows are estimates of the approximate staff resources associated with carrying out the various tobacco program related activities.

(The information follows:)

UNITED STATES DEPARTMENT OF AGRICULTURE
PRESIDENT'S BUDGET
PROGRAM-BY-PROGRAM SUMMARY HISTORY
ESTIMATED COSTS RELATED TO TOBACCO ACTIVITIES
(Dollars in Thousands)

DIRECT OUTLAYS a/	FY 1992 Actual	FY 1993 Actual	FY 1994 Actual	FY 1995 Actual	FY 1996 Estimate	FY 1997 Budget
<u>Agency/Activity</u>						
<u>Agricultural Research Service</u>						
Marketing and Utilization Other than Health-Related Research	\$3,623	\$3,393	\$3,263	\$0	\$0	\$0
Marketing and Utilization Health-Related Research	<u>1,895</u>	<u>1,678</u>	<u>504</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL, ARS	5,518	5,071	3,767	0	0	0
<u>Cooperative State Research, Education, and Extension Service</u>						
Research and Education						
Tobacco as a Model System	0	2,139	1,957	2,386	1,747	1,747
Plant Production Protection from Insects, Disease, and Weeds	505	502	296	0	0	0
Production Efficiency	1,515	435	441	0	0	0
Marketing and Utilization Other than Health-Related Research	345	199	113	0	0	0
Marketing and Utilization Health-Related Research	<u>292</u>	<u>66</u>	<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>
Subtotal, R and E	2,657	3,341	2,814	2,386	1,747	1,747
Extension Service						
Extension Education on Tobacco	770	759	750	711	662	660
Pest Management Projects	<u>41</u>	<u>41</u>	<u>40</u>	<u>39</u>	<u>38</u>	<u>36</u>
Subtotal, ES	<u>811</u>	<u>800</u>	<u>790</u>	<u>750</u>	<u>700</u>	<u>696</u>
TOTAL, CSREES	3,468	4,141	3,604	3,136	2,447	2,443
<u>Economic Research Service</u>						
Forecasting and Projection	234	256	201	130	130	130
<u>National Agr. Statistics Service</u>						
Agricultural Statistics	250	250	252	251	255	254
<u>Foreign Agricultural Service</u>						
World Market Analysis	255	264	275	163	140	140
Development of Foreign Markets	<u>199</u>	<u>149</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL, FAS	454	413	275	163	140	140

DIRECT OUTLAYS ^{a/}	FY 1992 Actual	FY 1993 Actual	FY 1994 Actual	FY 1995 Actual	FY 1996 Estimate	FY 1997 Budget
Agricultural Marketing Service:						
Market News	868	734	874	1,025	972	982
Inspection, Grading and Standardization	<u>208</u>	<u>206</u>	<u>170</u>	<u>188</u>	<u>204</u>	<u>207</u>
TOTAL, AMS	1,074	940	1,044	1,213	1,176	1,189
Agency/Activity:						
Farm Service Agency:						
Administrative Expenses of Price Supports ^{b/}	13,406	15,250	14,658	15,333	15,984	16,084
Crop Insurance: ^{c/}						
Indemnities	29,546	48,948	43,223	36,811	84,643 ^{d/}	36,705
Producer-paid premiums	<u>-20,199</u>	<u>-18,814</u>	<u>-17,508</u>	<u>-16,100</u>	<u>-16,400</u>	<u>-16,700</u>
Net Indemnities ^{e/}	9,347	30,134	25,715	20,711	68,243	20,005
Administrative Expenses for Delivery of Insurance:						
Private Insurance Companies	6,403	5,964	5,573	8,342	9,406	10,000 ^{f/}
USDA County Offices	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>373</u>	<u>187</u>	<u>0</u> ^{f/}
Total, Crop Insurance	<u>15,750</u>	<u>36,098</u>	<u>31,288</u>	<u>29,426</u>	<u>77,836</u>	<u>30,005</u>
TOTAL, FSA	29,156	51,348	45,946	44,759	93,820	46,089
Commodity Credit Corporation:						
Disaster Payments	2,934	2,351	5,142	1,365	0	0
TOTAL DIRECT OUTLAYS (EXCLUDING CCC)	\$43,088	\$64,770	\$60,231	\$51,017	\$97,968	\$50,245
COMMODITY CREDIT CORP.:						
1. Price Support Program: ^{h/}						
Loans Made	\$258,214	\$487,545	\$851,440	\$160,931	\$143,145	\$166,415
Sales Proceeds	0	0	0	0	0	0
Repayments	-205,015	-230,085	-130,650	-425,433	-524,787	-302,097
Marketing Assessments ^{j/}	-24,295	-22,038	-28,059	-33,694	-26,599	-28,835
Other Receipts and Outlays	<u>261</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>0</u>	<u>0</u>
Net Price Support Outlays	29,165	235,423	692,735	-298,193	-408,241	-164,517
2. Realized Losses or Gains (-) ^{j/} ..	-24,034	236,676 ^{k/}	-28,056	-33,691	-26,599	-28,835
3. Targeted Export Assistance (TEA)/ Market Promotion Program (MPP) ..	3,490	1,525	0	0	0	0
4 Total CCC Net Outlays (1+3) ^{j/} ..	\$32,655	\$236,948	\$692,735	-\$298,193	-\$408,241	-\$164,517

Footnotes:

^{a/} Direct outlays include spending for all USDA tobacco-related activities except lending. Direct outlays are not likely to be recovered in future years. Loans will normally be repaid in future years.

^{b/} These are indirect administrative costs that are related to administering the CCC tobacco price support programs at the county level. These administrative costs include activities related to:

- Determining and maintaining tobacco farm allotments, quotas, history records and issuing marketing cards;
- Preparing and conducting producer referenda by mail; and,
- Measurement services and farm visits

The collection of no-net-cost assessments are required by law to carry out the CCC tobacco price support programs. The collection of these assessments coupled with other tobacco program receipts assures that the CCC tobacco price support activities are carried out at no cost to the taxpayer.

^{c/} Numbers with minus (-) sign denote receipts.

^{d/} Increased indemnities were due primarily to drought and Blue Mold plant disease.

^{e/} Reflects primarily Government paid premium subsidies; and, any excess gain or loss.

^{f/} The Federal Agricultural Improvement and Reform Act (FAIR) of 1996, P.L. 104-127, dated April 4, 1996, provides for the establishment of an independent Office of Risk Assessment to administer the crop insurance program. These estimates are based on the FAIR Act provisions. However, if these estimates were based on the FY 1997 President's Budget, which assumed FSA would administer the crop insurance program, then the numbers would be straightlined at \$9,406 thousand for Private Insurance Companies and \$187 thousand for USDA County Offices.

^{g/} These direct outlays represent costs related to all activities involved in carrying out legislatively authorized and mandated tobacco programs, including those costs related to administration of CCC price support activities (see footnote ^{b/}), as well as activities concerning data collection on and providing government services related to the production and marketing of tobacco. While the collection of required assessments generally assure that the CCC price support activities are operated at no cost to the taxpayer, they may not necessarily be sufficient to defray all other costs for tobacco related programs.

- h/ CCC Estimates in the President's FY 1997 Budget Request, dated March 19, 1996. Net price support outlays include miscellaneous expenditures and receipts.
- i/ The Agricultural Adjustment Act of 1949 (The Act), P.L. 83-439, requires a marketing assessment for deficit reduction purposes be collected from producers and importers in an amount equal to 1.0 percent of the national price support for tobacco through the 1998 crop. Domestic producers or purchasers would remit to CCC an amount equal to 0.5 percent of the national price support level, importers would remit 1.0 percent of the national price support level for the same kind of tobacco.
- j/ Numbers with minus (-) sign denote net gains.
- k/ Nonrecourse loans on tobacco may not be settled for as many as 10 to 15 years after the loans are made. The long-term nature of tobacco program nonrecourse loans, coupled with short-term supply and demand conditions, tends to complicate their financial accounting. The No Net Cost Tobacco Program Act of 1982, P.L. 97-218, approved July 20, 1982, mandated that losses on tobacco loan program operations be reimbursed from assessments imposed on every pound of tobacco marketed. The assessment is applied equally to producers and buyers of tobacco, with each paying half the amount specified. However, the realized loss in FY 1993 is due to short-term supply and demand conditions that resulted in the settlement of tobacco loans that were made prior to the no-net-cost tobacco assessment requirement. In time, however, all pre-no-net-cost tobacco nonrecourse loans will be settled and the no-net-cost assessments collected on tobacco marketings will cover projected losses on the tobacco loan operation.
- l/ Numbers with minus (-) sign denote receipts.

UNITED STATES DEPARTMENT OF AGRICULTURE
PRESIDENT'S BUDGET
PROGRAM-BY-PROGRAM SUMMARY 1/
ESTIMATED STAFF YEARS RELATED TO TOBACCO ACTIVITIES

STAFF YEARS (FTE)	FY 1992 Actual	FY 1993 Actual	FY 1994 Actual	FY 1995 Actual	FY 1996 Estimate	FY 1997 Budget
<u>Agency:</u>						
Agricultural Research Service	49	50	47	0	0	0
Cooperative State Research/Education	0	0	0	0	0	0
Economic Research Service	1	1	1	1	1	1
National Agricultural Statistics Service	2	2	2	2	2	2
Foreign Agricultural Service	9	8	5	3	2	2
Agricultural Marketing Service	22	18	19	19	20	20
Farm Service Agency <u>2/</u>	239	268	250	256	256	242
Total, Staff Years ..	322	347	324	281	281	267

- 1/ The staff years shown in this table are based on estimates of resources that are likely to be associated with carrying out the various tobacco program related activities.
- 2/ This total includes estimates for both Federal and Non-Federal (County Office) staff years.

Question. Please explain how the tobacco price support and loan program is operated.

Answer. The Federal tobacco price support program limits and stabilizes the quantity of tobacco produced and marketed by producers using producer-mandated marketing quotas. In addition, minimum market prices are guaranteed producers through CCC nonrecourse loans. The tobacco program is authorized under two basic legislative authorities, as amended. The Agricultural Adjustment Act of 1938 provides for establishing marketing quotas, and the Agricultural Act of 1949 provides for price support if producers have not disapproved marketing quotas for such crops.

When producers vote in favor of marketing quotas, they are accepting Federal restrictions on the amount of tobacco they can market and the level of Federal price support. The national marketing quota, which is allocated among producers based on their historical production, is the amount judged sufficient to meet domestic and export demand. By limiting the supply of tobacco, the market price is stabilized and thus, farm income is supported. Unlike some other commodity price support programs, no direct payments are used as a support mechanism for tobacco.

The loan level for each kind of tobacco is announced each year by the Secretary of Agriculture, who uses the formula specified in legislation to calculate loan levels. The national loan level on 1996 crop flue-cured tobacco is \$1.601 per pound, and the burley loan level is \$1.737 per pound. At the auction warehouse, each lot of tobacco goes to the highest bidder, unless the bid does not exceed the Government's loan price. In such cases, the producer is paid the loan price by a cooperative, which redries, packs, and stores the tobacco for CCC. The cooperative, acting as an agent for CCC, later sells the tobacco with the proceeds going to repay the loan from CCC.

Question. Please explain how the Government incurs a cost, if any, since the implementation of the No-Net-Cost program.

Answer. In 1982, Congress passed the No-Net-Cost Tobacco Program Act (1982 Act). The intent of the 1982 Act was for no-net-cost assessments to cover projected losses in operating the tobacco price support-loan program.

Although costs of operating the tobacco price support-loan program through producer cooperatives are covered by no-net-cost assessments, administrative expenses of the Farm Service Agency common to the operation of all price support programs are not covered.

Tobacco, like other commodity price support programs, is subject to deficit reduction requirements enacted by the Omnibus Budget Reconciliation Act of 1990 and subsequently amended by the Omnibus

Budget Reconciliation Act of 1993. A marketing assessment of 1 percent of the support level is collected on every pound of domestic tobacco marketed and is divided equally between producers and purchasers. In addition, beginning in 1994, importers of tobacco are required to pay a budget deficit assessment equal to 1 percent of the national price support level on imported-foreign tobacco for which there is a like kind domestic tobacco subject to marketing quotas

Question. Explain what those costs/savings were since the No-Net-Cost program began, and the estimate for FY 1996, 1997, and 1998.

Answer. The no-net-cost assessment does not apply to pre-1982 crop tobacco that was settled in future years, as was the case in FY 1993 when CCC incurred losses on \$258.7 million of pre-1982 crop flue-cured tobacco. CCC incurred realized losses on pre-1982 crop tobacco from FY 1982 through FY 1993 when the last of the pre-1982 crop tobacco was liquidated. As noted above, administrative expenses of the Farm Service Agency common to the operation of all price support programs are not covered by the no-net-cost assessments.

Question. Please explain how the No-Net-Cost program operates and how the assessments are collected each year.

Answer. U.S. producers have paid no-net-cost assessments since 1982, while purchasers of flue-cured and burley tobacco have also been paying these fees since 1986. An assessment is collected on every pound of tobacco marketed. The level of the assessment depends on the amount of tobacco held by producer cooperatives, anticipated demand, interest rates, and other factors affecting the CCC-loan collateral tobacco. Assessments are collected when the tobacco is marketed. The assessment funds are deposited in an escrow account within CCC and held to reimburse CCC for any financial losses resulting from the operation of the tobacco price support program. Losses occur when a cooperative sells loan collateral tobacco at a price insufficient to cover the loan principal, plus interest, due CCC.

Question. Please provide a breakdown by year as to how much has been collected each year.

Answer. (The information follows:)

Commodity Credit Corporation
No Net Cost Assessments (NNCA) Collected, Interest Accrued, and NNCA Fund Application
From 1982 through March 31, 1996

Fiscal Year	(1) NNCA Principal Collected	(2) INCCA Principal Collected	(3) Less CCC Tobacco Principal Loan Loss Recoveries	(4) Cumulative NNCA Principal Ending Balance	(5) NNCA Interest Accrued	(6) INCCA Interest Accrued	(7) Less CCC Tobacco Interest Loan Loss Recoveries	(8) Cumulative NNCA Interest Ending Balance	(9) Cumulative Combined INCCA Interest Ending Balance
1983	\$8,808,811	\$0	\$0	\$8,808,811	\$453,929	\$0	\$0	\$453,929	\$9,262,740
1984	28,515,885	0	0	37,324,696	2,593,593	0	0	3,053,522	40,378,218
1985	63,765,339	0	0	101,090,035	7,580,117	0	0	10,643,639	111,733,674
*1986	229,214,488	0	94,446,900	235,857,623	18,262,587	0	15,024,507	13,881,719	249,739,342
1987	54,769,702	0	131,726	290,495,599	16,552,831	0	58,851	30,375,699	320,871,298
1988	39,039,703	0	271,784	329,263,518	21,491,643	0	85,960	51,781,382	381,044,900
1989	25,045,165	0	827,420	353,481,263	29,013,493	0	217,783	80,577,092	434,058,355
1990	26,325,471	0	124,574,899	255,231,835	26,061,870	0	43,351,928	63,287,034	318,518,869
1991	16,364,794	0	13,272,417	258,324,212	18,067,196	0	6,215,767	75,136,463	333,462,675
1992	7,271,168	0	58,107,263	207,488,117	11,722,996	0	25,369,407	61,492,052	268,980,169
1993	16,631,288	0	50,906,454	173,212,951	6,673,481	29,991	28,192,689	39,972,844	213,185,795
1994	52,703,109	4,065,962	16,025,956	213,956,066	6,766,268	0	4,976,732	41,792,371	255,748,437
1995	67,397,528	14,804,129	1,967,851	294,189,872	16,038,793	988,720	941,865	57,878,019	352,067,891
*1996	9,256,143	1,098,022	1,528,894	\$303,015,143	8,679,428	612,132	515,015	\$66,654,564	\$369,669,707
	\$645,108,594	\$19,968,113	\$362,061,564		\$189,974,225	\$1,630,843	\$124,950,504		

Explanation

- (1) - The NNCA program was begun with the 1982 Crop Year Producer contributions and then expanded to the Purchaser contribution for 1986 and subsequent crop years. These collection totals are reflected by Fiscal Year (FY) net of refunds and adjustments.
- (2) - The Importer No Net Cost Assessment (NNCA) program was begun with the 1994 calendar year importer contributions. These collection totals are net of refunds.
- (3) - CCC Tobacco Loan Losses on 1982 and subsequent Crop Years are recoverable from NNCA funds under the NNC program act. Principal loan losses recovered from NNCA collected principal funds available are broken out by fiscal year in which recovery was taken.
- (4) - The NNCA Principal Collected Ending Balance is the Fiscal Year End (FYE) Combined net Producer, Purchaser, and Importer (ie. NNCA) Principal collected in columns (1) and (2) less loan loss recoveries (or offsets) in column (3).
- (5) - CCC accrues interest on these NNCA deposits in trust as additional funding for the NNCA program. Interest accrues at the CCC borrowing from Treasury rate.
- (6) - CCC accrues interest on these NNCA deposits in trust as additional funding for the NNCA program. Interest accrues at the CCC borrowing from Treasury rate.
- (7) - CCC Tobacco Loan Losses on 1982 and subsequent Crop Years are recoverable from NNCA funds under the NNC program act. Interest loan losses recovered from NNCA interest earned funds available are broken out by fiscal year in which recovery was taken.
- (8) - The NNCA Interest Accrued Ending Balance is the Fiscal Year End (FYE) Combined net Producer, Purchaser, and Importer interest accrued in columns (5) and (6) less recoveries in column (7).
- (9) - The NNCA Combined ending balance adds column (4) with column (8).

* - FY 1986 collections do not include \$165.1 million in NNCA collections related to purchasers.

** - Fiscal Year 1996 is only half a year totals through March 31, 1996.

Question. Please provide a breakdown by year as to how much the budget deficit assessment was and how much has been collected each year.

Answer. (The information follows:)

**Commodity Credit Corporation
Tobacco Budget Deficit Program or Tobacco Marketing Assessments (TMA) Collected
From Inception through March 31, 1996**

Fiscal Year Collected	Tobacco Budget Deficit Assessment	OBRA 90 TMA Producer	OBRA 90 TMA Purchaser	OBRA 93 BDMA Importer	Total TMA & BDMA by Year
1989	\$3,501,000				\$3,501,000
1990	3,708,000				3,708,000
1991	268,789	\$5,078,913	\$5,078,913		10,426,615
1992		12,474,396	11,820,285		24,294,681
1993		11,682,210	10,355,246		22,037,456
1994		13,876,873	9,884,944	\$4,296,738	28,058,556
1995		12,289,436	13,311,224	8,093,480	33,694,140
*1996		5,924,533	7,846,859	1,905,871	15,677,263
Total Tobacco Budget Deficit Revenue Collected	<u>\$7,477,789</u>	<u>\$61,326,360</u>	<u>\$58,297,471</u>	<u>\$14,296,090</u>	<u>\$141,397,710</u>

Note 1 - Budget Deficit Revenues are applied against CCC current year outlays and operating losses.

Note 2 - The acronym BDMA stands for Budget Deficit Marketing Assessments collected on Tobacco Importers beginning in 1994.

* FY 1996 data is through March 31, 1996

Question. How much for FY 1996 and 1997?

Answer. The CCC FY 1997 President's budget estimates that tobacco marketing assessments will total \$22.842 million and \$24.053 million in fiscal years 1996 and 1997, respectively and that importer budget deficit marketing assessments will total \$3.757 million and \$4.782 million in fiscal years 1996 and 1997, respectively.

Question. How many other commodities have a budget deficit assessment?

Answer. Sugar, peanuts, and dairy also currently have a marketing assessment program. However, the collection of the dairy program assessment ends on May 1, 1996, as mandated by the FAIR Act.

Question. Where does the money collected from the budget deficit assessments go?

Answer. As you know, commodity price support programs are operated and financed through the CCC. The CCC borrows funds from the United States Treasury and repays those borrowings, with interest, from program receipts, and from appropriations. When a budget deficit assessment is collected, the funds are credited directly to the Corporation's fund, not the General fund of the Treasury. These

receipts reduce the Corporation's gross outlays, and, subsequently, the amount it must borrow from the Treasury to continue operations. The Tobacco Budget Deficit Assessment revenues are offsets to both tobacco program gross outlays and gross realized losses. However, collection of the assessments, regardless of how credited, act to directly reduce the Federal deficit.

FSA COUNTY COMMITTEES

Question. As you begin implementing the FAIR Act of 1996, how will you use the FSA county committees?

Answer. Training for county committees on provisions of the FAIR Act will begin by June 1, 1996. However, in general, the county committee duties will be similar to the period prior to enactment of the FAIR Act.

For farm credit loans, county committees will continue to make loan eligibility determinations. For nonassistance program crops, they will determine the disaster area. For conservation programs, they will determine the disaster area as well as program priorities with counterparts in NRCS. For contract crops under the FAIR Act, they will administer the program by reviewing and approving or disapproving division of payments. They will hear appeals in all of these areas.

County committees will hire the county executive director, administer all FSA programs approved for the county, conduct county committee elections, lease adequate space for the county office, ensure that all producers understand FSA programs, cooperate with other agencies in delivering producer programs, and conduct hearings and inquiries when necessary or as directed by the State committee.

Question. What changes do you see in their role or structure, if any?

Answer. At this time, we see no change in the county committee structure and foresee very little change in their role.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

HIGH PREMIUM RATES

Question. You state crop insurance participation was up to 80 percent of all crops last year. Of course, there was a requirement to buy crop insurance in order to participate in USDA programs. That requirement was dropped in the new Farm Bill.

Also, we still hear from farmers in Arkansas that crop insurance just does not pay for them. They cite problems of high premium costs and low indemnity rates. I have received documents from farmers in my

State showing the cost of premiums, in some cases, are at 30 percent or 40 percent of the rate of coverage. What can be done to bring these rates of premiums down to a level that will better attract farmers into the program?

Answer. Premium rates are based on the experience of farmers who have purchased crop insurance in an area. If premium rates in an area are high, it is because those farmers have collected large crop insurance indemnities year in and year out. During 1985-1994, farmers in Arkansas paid an average premium rate of just 10 percent and had an average loss ratio of more than 200 percent. This means that the average premium rate during this period should have been more than 20 percent in order for the Government to break even.

PARTICIPATION RATE WITHOUT LINKAGE

Question. To what extent do you think crop insurance participation rates will drop since the USDA program linkage is now removed?

Answer. Projecting how producers will react to the waivers is difficult. On one hand, payment of \$50 against a catastrophic crop loss may seem to be a minor expense. On the other hand, the perceived complications of dealing with the paperwork, certifying yields, and so forth, may cause some producers to elect the waiver.

Offering producers the opportunity to waive crop insurance coverage is expected to reduce participation at the catastrophic coverage level. The fact that the coverage is premium-free is important. Producers pay only a small processing fee to obtain it. Most producers probably will opt to pay this fee because it is small compared with the potential amount of assistance in disaster years. However, many producers, perhaps 25-30 percent, might not participate with the absence of mandatory linkage. These are more likely to be producers who have only a small financial interest in a crop. So, it is likely that the erosion of insured acres would be much less than this potential. Therefore, a decline of 25 percent in the number of insured producers may result in a reduction of only approximately 5 to 10 percent of acres insured at the catastrophic level. For buy-up coverage, producers have already chosen to pay premiums for such coverage. And, with favorable program experience, they are likely to continue to do so.

ADDITION OF NEW COMMODITIES

Question. What progress is being made to bring new commodities (such as tomatoes in Arkansas) into the crop insurance program?

Answer. The fresh market tomato crop insurance program was expanded into five counties in Arkansas for the 1996 crop year. The expansion counties are Ashley, Bradley, Cleburne, Drew, and Stone.

In addition, crop insurance pilot programs are underway for blueberries, canola, millet, and citrus and tropical fruit trees. We plan several additional pilot programs for the 1997 crop year and initial development work is underway for an additional several dozen crops. The following crops are currently being analyzed for potential crop insurance programs (those marked with an asterisk are expected to be offered as pilot programs for the 1997 crop year):

Aquaculture (catfish, trout, salmon, bait, fish, oyster, and crayfish)	Lettuce-Head
Artichokes	Lettuce-Leaf
Asparagus	Mushrooms
Avocados*	Nursery Crops (in-ground, containerized, cut flowers and greens, sod, etc.)
Beets	Nuts and Nut Trees
Broccoli	Olives
Buckwheat	Pasture and Rangeland
Cabbage	Pecans*
Cantaloupe	Peppermint
Carrots	Pineapple
Cauliflower	Pistachios
Celery	Pumpkins/Squash
Cherries-Sweet	Seed-Forage
Chili Peppers	Seed-Lawn
Citrus/Tropical Fruit and Trees	Sesame Seed
Crambe	Spinach
Cucumbers	Strawberries
Eggplant	Sweet Potatoes*
Fresh Market Snap Beans	Tart Cherries
Garlic	Watermelon
Hay	

Research on any of these crops may not lead to development of a new crop program. Data may suggest that growers are not interested in paying for insurance, or the crop may not be suitable for development of an actuarially sound insurance program.

IMPACT OF PRIVATE SECTOR SALES

Question. What would be the effect of allowing crop insurance to be sold and serviced only by the private sector?

Answer. It should be possible for the private sector over a given period to do as you suggest without adverse impact on farmers or Government, because of the large number of private crop insurance agents (about 28,000), their extension throughout the country, their presence in all agricultural producing areas, their long-term experience with all forms of insurance, their 15 years of experience with the FCIC program, and the fact that they wrote approximately 1.25 million crop insurance policies last year, which was approximately 60 percent of the total number of policies written. However, I want to stress that there will need to be a transition. We are currently in conversation with the private insurance industry as required by the FAIR Act on the scope and pace of withdrawal of FSA delivery.

Question. What parts of the country (if any) would be particularly harmed?

Answer. We do not believe that having only private sector agents write crop insurance would harm any areas of the country. These agents also write life, auto, home, or other forms of insurance with no harm to the country. However, again I want to stress that it will take some time before we can rely exclusively on private agents for all areas of the country.

IMPACT OF FARM SERVICE AGENCY SALES

Question. What would be the effect of requiring all crop insurance to be sold and serviced by the Farm Service Agency?

Answer. Crop insurance at the additional coverage levels requires a financial commitment from the insured person. Private agents, who have a direct financial stake in crop insurance sales, are better motivated to convince producers to make that commitment. Sales of crop insurance at the additional coverage levels are regarded as the best defense against future ad hoc disaster assistance programs. Private agents are generally considered the prime source for educating, counseling, and establishing precedent risk management strategies for individual producers similar to their efforts in other lines of personal and farm insurance. Thus, achieving the goal of attaining relatively high participation at the additional coverage levels is best accomplished by continuing sales through private agents. Presently, about 28,000 local private insurance agents sell crop insurance. There are about 11,500 permanent full-time non-Federal county office employees in the local offices of the Farm Service Agency.

REALIZED SAVINGS

Question. Since many of the traditional jobs of FSA will be eliminated by the new Farm Bill, would this change result in savings compared to what we will spend on sales commissions to private companies?

Answer. The cost of salaried employees of the local FSA office who complete forms rather than actively sell insurance is likely to be less than the cost of private agents. We and GAO are currently conducting audits of several reinsurance companies to verify their program delivery expenses as required by the Federal Crop Insurance Reform Act of 1994. However, there are other cost factors to consider besides salary vs. commissions. The equipment and other resources used by insurance companies that presently service policyholders has been a long-term investment to adequately respond to an ever changing risk management environment. FSA would need to make a comparable investment to prepare for selling and servicing levels of coverage above catastrophic. In addition, the likely decrease in crop insurance participation caused by using salaried FSA office personnel instead of commissioned sales agents will leave the Government more vulnerable to renewed demands for ad hoc relief programs that would not be

necessary if farmers purchased adequate levels and amounts of crop insurance.

CRP REGIONAL EMPHASIS

Question. Most CRP participation has been located in the Midwest and Plains States. There has been criticism of the program that some acreage was entered into the program that was highly productive while less productive lands were not approved even though enrollment of those lands would have resulted in a greater conservation value. Do you anticipate any change in CRP enrollments to better achieve conservation goals tied to erosion control, water quality, and other factors?

Answer. USDA, in consultation with EPA, FWS, and private environmental groups, has implemented an Environmental Benefit Index (EBI) to rank CRP bids. This index provides a relative ranking of the environmental benefits and costs of individual bids to help ensure that the most environmentally sensitive land is enrolled into the program taking into account wildlife, water quality, erodibility, forestry and cost. The Department is currently reviewing the EBI to see if any adjustments are needed for future enrollment periods. We are considering ways to ensure that land that should remain in production does so, while the most sensitive lands are retired.

Question. If so, do you think we will see a shift in the regional emphasis of program participation?

Answer. CRP enrollment patterns are affected by the environmental benefits index, land eligibility criteria, relative crop prices, general program demand, and other factors. Regional program participation rates have shifted for each signup. Signup thirteen enrollment results give one indication of the bid approval patterns that may occur in the future. Projections about upcoming regional enrollment shifts cannot be developed until final decisions about future EBI and/or land eligibility policy have been made.

We are including a press release that announced the results of the thirteenth signup last fall.

USDA ACCEPTS MORE THAN 683,000 ACRES INTO CRP

WASHINGTON, Dec. 21, 1995--Agriculture Secretary Dan Glickman announced today that 683,390 acres of highly erodible and other environmentally-sensitive cropland have been accepted into the Conservation Reserve Program (CRP).

The CRP provides annual rental payment to farmers and landowners who retire environmentally-sensitive acreage from crop production and has been tremendously beneficial for producers and the general public. The Clinton Administration plans to continue supporting this highly successful conservation program and emphasize higher environmental standards on land accepted for enrollment.

"The bidding and enrollment processes for this signup were modified to ensure that only the most environmentally-sensitive lands were accepted," Glickman said. "The overall result of the 13th signup was a shift toward a CRP with significantly higher environmental value."

Among the changes was automatic top environmental ranking of acreage offered for establishment to field windbreaks, grass waterways, shallow water areas for wildlife, filterstrips and shelterbelts. In addition, bids involving filterstrips and riparian buffers received a 10 percent higher bid cap. These practices are especially important because of their role in protecting and enhancing water quality and providing wildlife habitat.

"The results of using this incentive exceeded our hopes, and I am especially pleased that over 33,900 acres of filterstrips have been enrolled," Glickman said. This is an increase of over 2,700 percent above the 1,227 acres enrolled in the 12th signup. Also, about 75,000 acres of trees will be planted, and over 2,000 acres will be devoted to wildlife habitat."

State Farm Service Agency offices had authority to develop a flexible selection process on evaluating CRP bids to ensure that maximum environmental benefits are obtained. In addition, unlike past signups, producers were notified of the bid cap before submitting bids. The average rental rate for this signup is projected to be \$52.92 per acre, compared to the average rental rate for the 12th signup of \$62.98 per acre.

Approximately 1.18 million acres had been offered during the 13th CRP signup, held September 11-22, to replace acreage withdrawn under the 'early-out' opportunity offered earlier this year. While preliminary estimates indicated approximately 651,000 acres had been withdrawn, the final figure was 683,390.

The following table provides additional 13th signup information by State:

CRP THIRTEENTH SIGNUP

STATE	NUMBER OF BIDS	NUMBER OF CONTRACTS	ACRES CONTRACTED	AVG. RENTAL RATE PER ACRE	TOTAL ANNUAL RENTAL PAYMENT
U. S. TOTAL	24,441	13,855	683,390.3	\$52.92	\$36,165,122
AL	350	199	11,674.4	43.87	512,156
AK	2	0	0.0	0.00	0
AZ	0	0	0.0	0.00	0
AR	82	49	2,681.2	40.31	108,079
CA	7	5	3,485.3	23.05	80,336
CO	120	74	5,443.3	26.39	143,649
CT	0	0	0.0	0.00	0
DE	3	2	61.9	79.00	4,890
FL	105	67	3,244.8	35.34	114,671
GA	411	342	10,906.4	36.55	398,629
HI	0	0	0.0	0.00	0
ID	136	72	5,710.8	40.81	233,058
IL	2,647	1,625	36,196.4	87.98	3,184,559
IN	782	399	7,454.3	80.75	601,935
IA	4,066	1,728	78,224.0	92.70	7,251,365
KS	1,175	743	36,839.1	40.10	1,477,248
KY	344	244	8,725.5	64.29	560,962
LA	125	88	6,735.2	41.35	278,501
ME	8	0	0.0	0.00	0
MD	151	108	1,863.6	66.93	124,731
MA	6	3	46.9	123.00	5,769
MI	1,525	755	23,499.2	49.14	1,154,751
MN	1,383	874	18,097.9	68.54	1,240,430
MS	757	559	42,395.6	40.80	1,729,740
MO	2,003	1,180	75,536.5	66.01	4,986,164
MT	674	446	75,148.3	30.52	2,293,526
NE	836	516	24,590.4	61.40	1,509,851

NV	0	0	0.0	0.00	0
NH	3	1	10.5	48.00	504
NJ	4	3	27.4	59.25	1,623
NM	57	47	6,615.4	22.30	147,523
NY	130	98	3,400.0	35.85	121,890
NC	216	144	2,648.9	44.34	117,452
ND	510	395	35,266.0	26.43	932,080
OH	1,335	485	9,516.7	66.09	628,959
OK	356	204	16,183.5	28.41	459,773
OR	51	2	29.0	74.57	2,163
PA	224	188	6,165.0	40.46	249,436
PR	3	3	162.0	50.00	8,100
RI	0	0	0.0	0.00	0
SC	296	239	5,941.7	33.17	197,086
SD	476	214	16,539.1	31.96	528,590
TN	300	254	9,682.5	50.91	492,936
TX	587	311	42,783.7	31.63	1,353,248
UT	7	0	0.0	0.00	0
VT	0	0	0.0	0.00	0
VA	113	55	1,350.6	43.44	58,670
WA	281	167	13,860.7	55.10	763,725
WV	1	1	35.4	30.00	1,062
WI	1,787	962	33,869.0	61.76	2,091,749
WY	6	4	742.2	18.26	13,553

CRP COST-SHARE RECOVERY

Question. Since the inception of CRP in the 1985 Farm Bill, enrollment contracts have been for periods of 10 years. The new Farm Bill allows for the termination of certain contracts after a period of 5 years. What levels of federal funding have been used to provide cost share assistance for CRP enrollments related to seeding and other preparatory expenses?

Answer. From the inception of the CRP until September 30, 1995, USDA has provided \$837 million in cost-share assistance. CRP cost-share assistance has been provided at 50 percent of the actual cost at an average rate of \$24 per acre. This rate varies from State to State and by conservation practices. Some practices such as grassed waterways and shallow waterways receive cost-share payments at approximately \$100 per acre while tame grass planting have cost-share rates of \$20 per acre. Over the past 10 years the average cost has increased, and USDA currently estimates cost-share rates of \$33 per acre.

Question. Will the Secretary be able to limit the retirement of CRP acreage in those cases where there has been substantial federal investment in cost share?

Answer. The early termination provision applies to contracts that were enrolled prior to January 1, 1995, that have been in effect for at least 5 years. The law provides that filter strips, waterways, riparian areas, windbreaks, and shelter belts, and land with an EI greater than 15 is not eligible for early termination. Other lands of high environmental value (including wetlands) as determined by the

Secretary are also ineligible for early termination. Relatively high Federal cost-share investment, in itself, would not necessarily be considered as having high environmental value.

EQIP - PHASE IN

Question. I understand the new conservation program, EQIP, will be phased in over a 6-month period. Has the Department yet determined which agency will be responsible for administering this program?

Answer. Yes. The appropriate USDA agency will administer the interim EQIP through its existing regulations. FSA will administer the EQIP through the ACP and NRCS will administer EQIP through the Colorado River Salinity Control and the Great Plains Conservation Program. For the permanent EQIP beginning in October 1996, the NRCS has primary responsibility for setting policy. We expect the Secretary to direct NRCS and FSA to jointly develop a system utilizing to the fullest extent their networks of State, county, and local officials to assist in program delivery.

Question. As old programs, such as ACP, WQIP, and others are phased out, will any remaining funds within those accounts be transferred to EQIP?

Answer. The remaining funds of the ACP, which includes the WQIP, will be used during the interim period under the policies and procedures of the ACP in a manner consistent with the goals and objectives of EQIP. After the interim period, those ACP funds not obligated will be returned to the Treasury.

Question. Do you intend to allocate EQIP funding to the states by formula or will you make funding decisions based on individual applications, specific regional needs assessments, or some other basis?

Answer. Interim EQIP funding provided through ACP will be distributed by formula. Interim EQIP funding provided through CRSC and GPCP will be distributed by NRCS. The basis for distributing EQIP funds under the permanent program has not yet been determined.

EQIP - SIZE ELIGIBILITY

Question. I understand the Secretary will establish standards to define "large operators" that will be ineligible for cost sharing for animal waste management facilities under this program. In my state, many small operators contract with larger companies for livestock production. Do you know if there is any intention to define operators with a common contractor to be considered collectively for purposes of size eligibility or will eligibility be based on an operator per operator basis?

Answer. For the interim administration of the EQIP under the ACP rule, the FSA does not intend to consider collectively, for purposes of eligibility, operators with a common contractor. The NRCS has indicated that large livestock operations for EQIP will be defined through the rulemaking process.

Question. How will you insure that states that may rank low in overall livestock production, yet have specific areas of intense production activities, will be able to compete nationally for these funds?

Answer. Funds will be targeted to where the greatest impact can be felt, regardless of the quantity of livestock production. Fifty percent of the funds will be targeted for livestock production. The other 50 percent can be used for crop production and other uses in those States that rank low in overall livestock production and need funds.

QUESTIONS SUBMITTED BY SENATOR KERREY

Question. The new Farm Bill requires FSA to discontinue providing catastrophic risk coverage in those areas where there is adequate private delivery of crop insurance. Section 508(b)(4) of the Federal Crop Insurance Act requires USDA to assess the need for county office delivery. Has the Department taken any steps to do so, and if so, what?

Answer. The Department has begun working on this issue. Recently, USDA met with an Industry Steering Committee, which is composed of the private insurance companies and their trade associations, to begin discussions. A working meeting to plan and develop criteria and standards is scheduled for May 9. Risk Management personnel have begun generating the data that will be required for evaluating the States or areas where FSA can prudently withdraw from delivering the CAT product.

The two principal tasks facing the Department and industry in addressing this issue are: (1) Identifying the areas or States where FSA will withdraw; and (2) Designing the process that will be used in transferring the business from FSA to the companies with minimal disruption and confusion in the marketplace. In addition, the Department is consulting with grower organizations and other interested parties prior to any final decisions and the implementation process.

CATASTROPHIC RISK INSURANCE COVERAGE

Question. Could you tell me the actual costs incurred by county FSA offices, on a State-by-State basis, in FY 1995 for delivering catastrophic risk coverage (including training and loss adjustment)? Further, what are the estimated costs for this activity for FY 1996 on a State-by-State basis?

Answer. The following table reflects actual FY 1995 and estimated FY 1996 county office catastrophic risk coverage delivery costs, on a State-by-State basis. The FY 1996 costs are based on legislation existing when the 1997 budget was prepared and do not include the impacts of delinkage and waivers of coverage that were legislated in the new Farm Bill. The costs provided include workday costs and other administrative costs such as training and postage. The costs reflected do not include costs associated with loss adjustment. Loss adjustment activities associated with catastrophic risk coverage activity are performed by contract individuals that are paid at the National level through the Crop Insurance Fund under the Loss Adjustment and Contract Service Agreement.

(The information follows:)

**FY 1995 Actual and FY 1996 Estimated FSA County Office
Delivery Costs For Catastrophic Risk Coverage
FY 1997 President's Budget**

State	FY 1995 Actual	FY 1996 Estimated
Illinois	\$2,764,253	\$2,434,253
Indiana	2,114,060	1,861,681
Iowa	1,773,475	1,561,755
Michigan	1,205,484	1,061,571
Minnesota	1,429,199	1,258,579
Missouri	2,089,662	1,840,195
Ohio	1,987,407	1,750,148
Wisconsin	1,707,649	1,503,788
Total Midwest Area	\$15,071,190	\$13,271,970
Connecticut	\$60,791	\$53,534
Delaware	63,925	56,294
Maine	145,928	128,507
Maryland	291,327	256,548
Massachusetts	87,984	77,481
New Hampshire	66,191	58,289
New Jersey	128,244	112,934
New York	693,767	610,944
Pennsylvania	751,943	662,175
Rhode Island	10,365	9,128
Vermont	125,236	110,285
West Virginia	362,831	319,516
Total Northeast Area	\$2,788,534	\$2,455,635
Idaho	\$716,896	\$631,312
Montana	727,860	640,967
Nebraska	1,668,144	1,468,999
North Dakota	820,528	722,572
Oregon	411,166	362,081
South Dakota	1,276,602	1,124,200
Washington	501,012	441,200
Wyoming	198,730	175,005
Total Northwest Area	\$6,320,939	\$5,566,336
Alabama	\$793,612	\$698,870
Arkansas	1,277,014	1,124,562
Florida	468,956	412,972
Georgia	1,096,675	965,752
Kentucky	2,500,429	2,201,924
Louisiana	898,599	791,323

Mississippi	1,039,224	915,160
North Carolina	1,742,538	1,534,511
South Carolina	509,046	448,275
Tennessee	1,951,697	1,718,701
Virginia	956,983	842,737
Total Southeast Area	\$13,234,773	\$11,654,787
Arizona	\$109,478	\$96,408
California	902,634	794,876
Colorado	661,471	582,503
Kansas	2,852,574	2,512,029
Nevada	63,412	55,841
New Mexico	272,380	239,863
Oklahoma	1,553,596	1,368,125
Texas	3,509,512	3,090,541
Utah	256,983	226,304
Total Southwest Area	\$10,182,038	\$8,966,492
Grand Total	\$47,597,474	\$41,915,220

Question. Do you know what criteria the Department will use to implement the newly amended Section 508(b)(4) of the Federal Crop Insurance Act regarding delivery of catastrophic risk protection?

Answer. The Department is still developing the criteria. They touch on two areas--the States or areas to be transferred and the transfer process.

With respect to the transfer process, two competing procedures were considered--transferring the business as a block versus having each farmer sign up with a company and transferring the policies one by one. Although the mass transfer procedure is quicker and fewer farmers are likely to cancel their policies during this process, we expect that farmers will be more satisfied with the policy-by-policy approach. Thus, we are now developing procedures along that line.

With respect to the States or areas to be transferred, we are now analyzing participation and agent availability data to decide what impact differing selection criteria would have.

Question. Further, can you give me your best estimate of the number of States from which USDA will withdraw from delivery of catastrophic risk protection in crop year 1997?

Answer. USDA does not currently have an estimate of the States to be selected. We are using the data previously mentioned to develop the criteria to identify the areas or States where we may transfer business. Although the criteria have not yet been agreed upon, we are looking at the number of companies writing crop insurance policies in each county, the number of private agents writing crop insurance policies in each county, and the number of private agents writing CAT-level policies in each county. There is a need for assurances that there are an adequate number of agents who now write or who may write CAT

policies in the future. For example, the private company system represents the following:

Agents now selling FCIC policies:	approximately 28,000
Counties with five or more agents:	approximately 74%

Despite the appearance of an adequate number of agents in most areas, we are considering options and an implementation strategy that ensure the process runs smoothly, efficiently, and with the least amount of disruption. The success of the initial phase will dictate the timing and follow up for the remaining States.

ALTERNATIVES TO T-YIELDS

Question. I have heard a number of complaints from farmers who chose to only take CAT coverage, regarding the low coverage given using transitional yields (t-yields). I know that it takes some work to get Actual Production History for farmers who are taking crop insurance for the first time, but it can be very helpful for the farmer to do so.

Do you have any information of the number of farmers who have their APH's based only on t-yields (that is, who have no actual yield data), both for those farmers who obtained their CAT coverage from FSA and for those farmers who obtained their CAT coverage from private insurance agents?

Answer. In 1995, a high percentage--typically 40 to 50 percent--of producers who purchased catastrophic coverage failed to certify a prior yield history. They did so in far greater numbers than did producers who purchased additional coverage. This is one reason that the loss ratio for catastrophic coverage was so much lower in 1995.

Producers who fail to certify any prior yields generally are assigned a yield for crop insurance that is equal to 65 percent of the transitional yield. In practical terms, this means that these producers must have an actual yield for the crop year that is less than about 25-30 percent of the farm program payment yield. This is done because analysis of loss patterns revealed that producers who fail to certify prior year yields have losses that are much greater than average. The reduced yield offers reflect these findings.

The source from which the producer obtained the catastrophic coverage made some difference, but not much. For corn, 49 percent of policyholders who obtained coverage at the local office of the FSA failed to certify a yield history compared with 35 percent at reinsured companies. For cotton, the percentages are 47 and 40, respectively; for wheat, 54 and 38. Data for other crops have not been prepared, but there is no reason to believe that the outcome would be substantially different.

In contrast, only 9 percent of producers who purchased additional coverage for corn failed to certify a yield history; for cotton, 14 percent; and for wheat, 10 percent.

The above data indicate whether a yield history was certified. Sometimes, the producer still qualifies for a normal t-yield because he or she is producing the crop for the first time. This exception to the normal rules would affect cotton more than corn or wheat because acreage has been expanding in the southeastern States. However, the percentage of producers who qualify under this rule likely is small.

Question. Does the Department have any plans with respect to "proxy yields" to be used instead of t-yields? I am particularly concerned with land that is coming out of the Conservation Reserve Program. There are many farmers who will be assigned very, very low yields on that land, compared to the farmers' surrounding fields. Would you comment on the possibility of using NASS data or APH data that is currently in the Office of Risk Management's database that could give a more accurate and equitable yield for that land.

Answer. Office of Risk Management (ORM) has been reviewing the characteristics of yields and practices included in its database and is examining alternatives to the current t-yields used. Preliminary analysis suggests substantial differences in average yields may occur compared with other producers and land in a given area. To maintain actuarial soundness, such differences must be recognized in setting insurance yields.

ORM will administer acreage emerging from CRP the same as any other insurable acreage. The same Actual Production History (APH) procedures, rating structure, and crop policy provisions apply to acreage emerging from the CRP. If the acreage emerging from CRP is part of the same unit, that acreage (CRP) may obtain the approved APH yield of the existing unit. For acreage emerging from CRP that is a separate unit, acceptable production records for the crop's acreage (before the enrollment in CRP) may be used instead of relying on t-yields. ORM issued Bulletin MGR-96-012 and corresponding Risk Management Notice RM-143 to inform insurance companies, agents, and FSA of the applicable policy provisions and procedures. ORM does not intend to discriminate against acreage emerging from CRP.

Currently, ORM has been unable to develop an alternative yield ("Proxy Yield") that is fair and equitable to all producers and to the taxpayer or Government. ORM will continue to strive for a feasible alternative to the current t-yields by possibly establishing a crop insurance yield for insurance purposes only, aware of the need to be actuarially sound, as mandated by law.

CROP REVENUE COVERAGE/INCOME PROTECTION

Question. We are hearing very positive feedback from farmers in Nebraska who are buying the new Crop Revenue Coverage. Could you give the subcommittee an update as to the number of policies of CRC as well as the number of policies of "Income Protection," or IP, revenue insurance that have been sold.

Answer. (The information follows:)

Nationwide:

Crop Revenue Coverage	
CRC Corn Policies	43,108
CRC Soybean Policies	<u>31,431</u>
Total CRC Policies	74,539

Income Protection

IP Corn Policies	651
IP Cotton Policies	13
IP Wheat Policies	<u>351</u>
Total IP Policies	1,015

Nebraska Only:

CRC Corn Policies	16,755
CRC Soybean Policies	<u>12,646</u>
Total CRC Policies	29,401

(IP policies are not offered in Nebraska.)

Question. How much money has the Department spent on developing and researching the IP and the CRC products?

Answer. At the recommendation of Congress, research into revenue-based insurance (including cost of production insurance) began nearly 3 years ago. Since then, Risk Management and the Economic Research Service have spent approximately \$750,000 on revenue-insurance related research, including research on revenue insurance, risk management savings accounts, and revenue assurance programs. This amount also includes the cost of developing the IP pilot program. The cost of developing CRC was borne by the private sector.

Question. What does the Department project as the Federal cost of providing CRC for various crops compared to the federal cost of providing the traditional multi-peril crop insurance?

Answer. We cannot estimate the cost for all crops reliably because we have developed premium rates for CRC for only corn and soybeans in Iowa and Nebraska. These rates generate a total premium approximately 25-30 percent higher than standard crop insurance. In addition, the extent of a subsidy affects the total cost. Two scenarios are considered.

The subsidy plan proposed and approved for CRC corn and soybeans based the producer premium subsidy on the price election announced for the standard crop insurance policy and based the administrative expense compensation to reinsured companies on the total premium. Under this scenario, the producer's premium subsidy does not change relative to the standard product. Expense compensation would increase by 25-30 percent, or \$40-50 million.

The second alternative bases the producer premium subsidy on the price used to calculate a premium under the CRC plan, a proposal that has been advanced by some parties but has yet to be determined if legally in compliance with the statute. Expense compensation is paid on the total premium, which is the same as the first scenario. For 1996, the price election for CRC corn is \$2.93 versus \$2.65 under the standard plan; for soybeans, the prices are \$6.87 and \$6.75, respectively. The prices are different because they were set at different dates. Under this proposal, the producer's premium subsidy for corn and soybeans nationwide would increase by \$50-60 million. Total costs would increase by \$90-110 million, including the administrative expense reimbursement.

These estimates use the nationwide business from 1995 as a base and assume that CRC achieves a 1.1 loss ratio, the same as standard policy coverage. They also assume no change in the number of acres insured at the additional coverage levels or in coverage level choice. They further assume that all acres insured at the additional coverage levels in 1995 would have purchased CRC, and that the increase in premium for Iowa and Nebraska is appropriate for nationwide. Costs for 1995 were restated to the price elections and CRC base prices for 1996.

If one wishes to assume that only some portion of insured acres would convert to CRC, the above estimates should be reduced proportionately. For example, if half the acres are assumed to convert, the costs would be one-half the above estimates.

Question. There is an overwhelming push from grain sorghum and wheat producers in Nebraska and other States for CRC to be made available to them, particularly since their neighbors who grow corn and soybeans have this crop insurance option. Does the Department intend to expand the availability of CRC and/or IP for producers of these crops in Nebraska and other drought-stricken States, where crop losses are expected to be very high this year?

Answer. Since CRC is a private sector product submitted under the provisions of section 508(h) of the Federal Crop Insurance Act (Act), the Department has no authority to expand it to other crops or areas. A request to make it available for wheat has been received. The scope of the expansion that the Department is willing to reinsure and can reinsure under legal authorities and fiscal responsibility is under careful consideration.

Expanding IP is also under consideration. As in 1996, the product would be offered only in selected counties in selected States. These have not been identified. Expansion of either product will be pursued in a cautious manner. There is no actuarial experience available for setting premium rates or estimating delivery costs. Rates have been set with theoretical models that may or may not accurately measure the risks and, therefore, those premium rates. Both CRC and IP were offered in 1996 as pilot programs under the authority of the Act.

Producers do have the opportunity to use options and futures markets to formulate effective strategies to hedge price risk. While the combination of standard crop insurance and options market strategies may be more difficult than is purchase of a bundled product, lack of CRC does not eliminate these choices.

A private sector product called market value protection (MVP) is available in most major producing States. MVP provides additional indemnities whenever there is a production loss and the market price increases between late winter and harvest. The higher price is paid on each bushel of loss.

FOREIGN AGRICULTURAL SERVICE QUESTIONS SUBMITTED BY SENATOR COCHRAN

INTERNATIONAL PROGRAM REVIEW

Question. Last year, when Secretary Glickman testified before this Subcommittee, he indicated that the Department was undertaking a review of international programs to determine how they might be changed to reflect the post-Uruguay Round trading environment. In addition, the Department was planning to review its export subsidy and credit guarantee programs to see how they might be made more effective as the trade liberalizing provisions of the Uruguay Round Agreement become effective.

What were the findings and what actions were taken as a result of USDA's interagency review of these programs?

Answer. With regard to export subsidy programs, USDA published an Advance Notice of Proposed Rulemaking last summer to solicit public comment on options to reform the Department's export subsidy programs: EEP, DEIP, SOAP and COAP. USDA is evaluating the options and will continue this review with other agencies shortly.

With regard to export credit programs, we are seeking to further tailor our programs to the changing world marketplace. For example, given the increasing privatization of imports in developing country markets as well as the broadened world trade in high value commodities, we have designed a new credit activity (Supplier Credit Guarantees) that we plan to implement this year. This new activity, which should bring new exporters and importers into CCC's export credit programs, is part of our ongoing effort to adapt to major changes in the world market place. In addition, we are using regional programs in some parts of the world and providing more flexible commodity coverage.

EXPORT SUBSIDY PROGRAMS

Question. The prepared testimony indicates that for the Department's export subsidy programs--the Export Enhancement Program, the Dairy Export Incentive Program, and the Sunflower and Cottonseed Oil Assistance Programs--the fiscal year 1997 budget provides the maximum levels consistent with the quantity and expenditure reduction commitments required under the terms of the Uruguay Round Agreement on Agriculture. What are the maximum levels for each of these programs consistent with the Uruguay Round Agreement on Agriculture, as compared to the maximum levels permitted by law?

Answer. The following chart shows the maximum expenditure levels for the Export Enhancement Program (EEP), the Dairy Export Incentive Program (DEIP), and the Sunflower and Cottonseed Oil Assistance Programs (SOAP and COAP) allowed under the Uruguay Round commitments and allowed by law for FY 1997:

(In \$ Millions)	Uruguay Round 1/	Authorized by Statute
EEP	\$861.3	\$250.0
DEIP	\$171.8 2/	\$171.8
SOAP and COAP	\$20.3	\$0

1/ The Uruguay Round Commitments are commodity specific, not program specific. The figures provided here are indicative of program limits.

2/ The maximum expenditure level for U.S. dairy export subsidies in fiscal year 1997 is \$171.8 million. However, the CCC budget estimates for fiscal year 1997 include projected outlays for DEIP which are below this level because of the annual quantity limitations on U. S. dairy export subsidies. These quantity limitations are expected to be more restrictive for operation of the DEIP than the annual expenditure limitations.

Question. Please provide for the record the total amount of bonus awards to U.S. exporters under the Export Enhancement Program, the Dairy Export Incentive Program, and the Sunflower and Cottonseed Oil Assistance Programs in each of fiscal years 1991 through 1995.

EXPORT ENHANCEMENT PROGRAM
Awards for Fiscal Years

<u>Fiscal Year</u>	<u>Bonus Awards</u>
1991	\$916,599,230.71
1992	968,198,565.92
1993	967,277,923.23
1994	1,149,702,412.28
1995	339,484,222.96

DAIRY EXPORT INCENTIVE PROGRAM
Awards for Fiscal Years

<u>Fiscal Year</u>	<u>Bonus Awards</u>
1991	\$39,260,777.78
1992	75,995,765.70
1993	161,796,935.97
1994	117,615,033.35
1995	140,224,807.83

**SUNFLOWERSEED AND COTTONSEED OIL
ASSISTANCE PROGRAMS**
Awards for Fiscal Years

<u>Fiscal Year</u>	<u>Bonus Awards</u>
1991	\$14,748,526.00 <u>a/</u>
1992	23,583,208.60
1993	32,119,473.17
1994	24,162,282.00
1995	16,800.00

a/ During fiscal year 1991, the bonus paid was in physical stocks of oil. For this year, the bonus award represents the estimate of the cost of the bonus oil on the date of the bonus agreement.

Question. In your testimony before the Subcommittee, you indicate that the Department anticipates using only \$10 million for sales of U.S. commodities and products under EEP, SOAP, and COAP in FY 1996. However, various industry groups are asking that these programs be used this year to export wheat flour, vegetable oil, and poultry.

In several letters provided at the time Congress was considering the Uruguay Round implementing legislation, the Administration made the commitment to use EEP, SOAP, and COAP to the maximum levels allowed under the World Trade Organization and U.S. law. Can you tell me how this commitment can be reconciled with the Department's projected sales activity for FY 1996?

Answer. As in the past, implementation of the EEP, SOAP, and COAP programs is governed largely by competitive factors such as subsidies and other unfair trade practices employed by supplier countries, and by evolving year-to-year circumstances such as fluctuations in world crop production that may influence supply and demand. It is unlikely that USDA will increase subsidized sales for the 1996 fiscal year given current world market conditions in which high commodity prices and tight supplies coupled with declining competitor export subsidies have made U.S. exports more price-competitive. Nonetheless, USDA's export subsidy programs remain available. USDA will continue to monitor world prices and the actions of our competitors, and when conditions warrant, USDA will utilize these subsidy programs to counter export subsidies of competitor countries and maintain and expand markets for U.S. exports.

Question. Also, please provide the Subcommittee with a report on the status of efforts by the Department and other agencies to finalize regulations and procedures for operating EEP in conformity with Administration commitments and with the revised EEP authority in the GATT implementing bill.

Answer. The interagency group reviewing EEP reform is currently evaluating the feasibility of using a pre-announced bonus mechanism for grains and oilseeds, while simultaneously using a reformed bid review bonus mechanism for dairy, eggs and poultry. USDA anticipates that the review process will be finalized prior to the new GATT year which begins July 1, 1996.

FOREIGN MARKET DEVELOPMENT/COOPERATOR PROGRAM

Question. The fiscal year 1997 budget proposes a new appropriations bill provision to allow the Cooperator Program funds to be awarded on a competitive basis.

How will awarding cooperator cost-share assistance funds on a competitive basis differ from how these funds have been awarded to date?

Answer. Currently, cooperator cost-share assistance funds are not distributed using a competitive process. All eligible trade associations are awarded funds to enable them to maintain an overseas presence for export promotion and technical trade servicing. Historically, the FMD has promoted basic program crops as a long-term venture by providing stable budgets from year to year, without annual competition between the commodity trade organizations. Periodic competition for

funding of the cooperators was not previously incorporated into the FMD for two reasons. First, in earlier years funding had been sufficient for all who requested financial assistance. Second, due to the nature of the FMD, it was considered difficult to evaluate the relative net benefits of different programs.

Beginning in 1998, however, all Federal programs must be in compliance with the Government Performance and Results Act (GPRA). The GPRA requires programs to develop strategic plans with specific goals and intermediate milestones. Performance measures will assess each program's effectiveness in achieving the broader goals and desired outcomes. Thus, the cooperator program will need to display its effectiveness in increasing U.S. exports, and the efforts of the cooperators --and their likelihood of achieving export success without Federal financial assistance.

Question. When will you be able to tell us more about how the funds will be awarded under this proposal--what criteria would be applied to requests for cost-share assistance, who would oversee the process, etc. Will this information be made available to the Subcommittee soon, so that it can properly consider this request?

Answer. FAS is currently examining ways to implement a competitive process for the cooperator program. One option we are considering is to "pool" a certain percentage of the available funds which could be redistributed to Cooperators to support new and creative marketing initiatives. Another option is to make the entire program subject to competition with long-term agreements. The Deputy Administrator for Commodity and Marketing Programs will oversee this process. We expect to have actual procedures and established criteria to the Subcommittee in the near future.

CARRYOVER BALANCES

Question. The Committee directed the Department to maintain the fiscal year 1994 level for the Cooperator Program in each of fiscal year 1995 and 1996 by drawing down unliquidated balances.

Please provide for the record the total amount of carryover balances spent, the total appropriation, and the total level of funding provided to support Cooperator marketing plans in each of fiscal years 1994, 1995, and 1996.

Answer. We will provide that information for the record.

Cooperator Program (\$millions)

	<u>FY 1994</u>	<u>FY 1995</u>	<u>FY 1996 Est.</u>
Carryover Balances Expended	--	\$11.0	\$9.7
Total Appropriation	<u>\$31.4</u>	<u>\$20.8</u>	<u>\$22.0</u>
Total Funding for the Cooperator Program	\$31.4	\$31.8	\$31.7

Question. You indicate in your prepared statement that carryover balances are nearing depletion. A \$4 million increase in appropriations is requested for the Cooperator Program for fiscal year 1997. This would be an increase in the direct

appropriation to \$26 million, from the \$22 million level provided for fiscal year 1996.

Are you proposing to supplement this funding by drawing further on the carryover balances? If so, what amount of carryover funds, if any, do you propose to use to supplement the fiscal year 1997 program appropriation? If not, aren't you proposing a decrease in the overall level of funding available for fiscal year 1997 for the Cooperator Program?

Answer. At this time, we estimate that \$5.4 million in carryover balances will be available to supplement fiscal year 1997 appropriated funding for the Cooperator Program, and will be fully utilized if FAS continues Cooperator Program activities at the prior year level.

Question. What is the total fiscal year 1997 program level proposed for the Cooperator Program?

Answer. Because the fiscal year 1997 program level for the Cooperator Program will be greatly influenced by congressional action on our budget request, a program level has not as yet been established. With the \$4 million proposed increase and full utilization of remaining carryover balance, we could maintain activities at the fiscal year 1996 level of \$34 million.

Question. What is the carryover balance in the Cooperator Program at the end of fiscal year 1996.

Answer. The carryover balance for the end of fiscal year 1996 is estimated at \$5.4 million.

Question. What is it projected to be at the end of fiscal year 1997?

Answer. Carryover balance for new program activities will be depleted by the end of fiscal year 1997.

FOREIGN MARKET DEVELOPMENT ACTIVITIES

Question. With respect to fiscal year 1997, the President's budget recommends that funding for Foreign Market Development be increased to \$58.343 million from the \$48.450 million level for fiscal year 1996. If the Cooperator Program is recommended to be funded at \$26 million, a \$4 million increase above the fiscal year 1996 appropriations level, what programs, in what amounts, make up the remaining difference?

Answer. The remaining programs, of our fiscal year 1997 request for the Foreign Market Development, making up the difference of \$6 million are: post expansion of \$2.7 million, Federal/State Market Improvement Program of \$1.5 million, Distributor Development Program of \$1.5 million, pay cost and contribution to retirement of \$.4 million, and a reduction for administrative savings of \$.1 million.

Question. Please provide a breakdown of the fiscal year 1997 request for Foreign Market Development, as compared to funding for these programs in each of fiscal years 1995 and 1996.

FOREIGN MARKET DEVELOPMENT	FY 1995	FY 1996	FY 1997
Cooperator Program	\$20,800	\$22,000	\$26,000
Annual Marketing Plans	3,000	3,500	5,000
Agricultural Trade Offices	10,895	11,118	13,768
Market Training and Outreach	0	410	0
Federal/State Market Improvement Program	0	0	+1,500
Distributor Development Program	0	0	+1,500
Administrative Costs	10,782	11,422	10,575
TOTAL	45,477	48,450	58,343

COOPERATOR PROGRAM BUDGETS

Question. Please provide a breakdown of how the funds for the cooperator program were allocated in fiscal year 1995 and in 1996 to date.

Answer. I will provide for the record a listing of fiscal year 1995 and 1996 base budgets for the cooperator program.

FOREIGN MARKET DEVELOPMENT BASE BUDGET

	<u>1995</u>	<u>1996</u>
American Forest and Paper Assn.	2,777,800	2,777,800
American Hort. Marketing Council	154,000	0
American Seed Trade Association	214,000	214,000
American Sheep Industry	129,000	129,000
American Soybean Association	6,672,000	6,672,000
Appaloose Horse Club	9,000	9,000
Cotton Council International	1,813,000	1,813,000
EUSAFEC	91,000	91,000
Leather Industries Association	159,000	159,000
MIATCO	91,000	91,000
Millers National Federation	19,000	19,000
Mohair Council of America	19,000	19,000
NASDA	186,000	186,000
National Cottonseed Products	141,000	141,000
National Dairy Board	363,000	363,000

National Dry Bean Council	98,000	98,000
National Hay Associates	62,000	62,000
National Peanut Council	621,000	621,000
National Renderers Association	1,137,000	1,137,000
National Sunflower Association	273,000	273,000
Or-Wash-Cal Pear Bureau	100,000	0
Papaya Administrative Committee	57,000	57,000
Protein Grain Products	62,000	62,000
SUSTA	91,000	91,000
USA Dry Pea & Lentil	160,000	160,000
USA Poultry and Egg Export Coun	1,560,000	1,560,000
USA Rice Council	1,742,000	1,742,000
U.S. Beef Breeds Council	106,000	106,000
U.S. Feed Grains Council	5,841,000	5,841,000
U.S. Hide, Skin and Leather	42,000	42,000
U.S. Livestock Genetics Export	697,000	697,000
U.S. Meat Export Federation	1,797,000	1,797,000
U.S. Wheat Associates	6,686,000	6,686,000
Western Growers Association	11,000	11,000
WUSATA	<u>127,000</u>	<u>127,000</u>
GRAND TOTALS	34,107,800	33,853,800

COCHRAN FELLOWSHIP PROGRAM

Question. What level of funding is included in FAS' request for the Cochran Fellowship Program?

Answer. Our fiscal year 1997 budget proposal includes \$2,428,000 for the Cochran Fellowship Program.

Question. For fiscal year 1996, we provided the \$250,000 requested to expand the program into Asia, particularly Indonesia and the Philippines. Has this program expansion occurred as planned?

Answer. Yes, the program expansion into Asia has occurred for FY 1996. For the Philippines we are planning training programs for 20 participants. We have identified programs in consumer food products, rice quality, hardwood products, agricultural statistics for grains and livestock, agricultural statistics for horticultural products, and soybean processing. For Indonesia we are planning programs for 16 participants in the fields of consumer food products, food quality and safety, and dairy herd management.

Additionally, we have initiated a pilot training program for Vietnam for FY 1996 and expect to increase our total number of participants from participating Asian countries by 35 percent.

Question. Are available resources for the program sufficient to extend fellowships to all countries seeking to participate in the Program? If not, what additional funding would be required to meet these requests?

Answer. Each year a number of requests are made to initiate the Cochran Fellowship Program in new countries. However, as with all requests for funding, these proposals have to be carefully evaluated. As an example of such proposals,

US Agricultural Affairs Officers in India have proposed that three major areas of India - Delhi-Haryana-Punjab, Maharashtra and Bangalore - can be targeted as "middle income." Given the rapid expansion of India's economy, the skills required in producing, marketing, and distributing food products will increase in demand as reforms continue over the next few years. We have also received requests to include Brazil, Bolivia, Cambodia, Burma, Macedonia, and Senegal for Cochran participation.

Question. The Cochran Fellowship Program received additional support through the Emerging Democracies Program and the Agency for International Development (AID) in past years. You indicate in your prepared testimony, Mr. Schumacher, that additional funds allocated to the program bring its funding to near \$2.5 million. What were the amounts, purposes, and sources of those funds?

Answer. Additional support from the Emerging Democracies Program and AID amounted to \$2.1 million and \$2.25 million respectively. These were used to fund additional fellows in selected countries of Eastern Europe, Africa, and the Newly Independent States. Attachment A provides a breakdown, by country and funding source, of the fiscal year 1995 and fiscal year 1996 estimated Cochran Fellowship participant levels.

Question. Which countries will be served by the Program in each of fiscal years 1995 and 1996? Please provide for the record the number of fellowships, amount of funding, and program achievements by country.

Answer. During fiscal 1996, appropriations will allow for the selection of about 50 participants above the 1995 level of 279. Three countries - Taiwan, Singapore, and Hong Kong - became ineligible to participate in the Cochran Program after 1995 due to their increased national per capita income levels. However, during 1996, Vietnam and Chile became eligible for participation in the program. Attachment B provides, for the record, the estimated number of fellowships per country expected, utilizing fiscal year 1996 appropriated funds.

Also, for the record, Attachment C provides examples of achievements, by country, the Program has documented in 1995.

ATTACHMENT A

TABLE II: Cochran Fellowship Program: 1995 Participant Levels By Funding Source

	Congressional Appropriations	Emerging Democracies	USAID	FY 95 TOTAL
I. <u>ASIA</u>				
China	17	0	0	17
Hong Kong	6	0	0	6
Indonesia	12	0	0	12
Korea	21	0	0	21
Malaysia	18	0	0	18
Philippines	11	0	0	11
Singapore	6	0	0	6

Taiwan	8	0	0	8
Thailand	<u>16</u>	<u>0</u>	<u>0</u>	<u>16</u>
Subtotal	115	0	0	115

II. NON-EU EUROPE

Albania	0	10	0	10
Bulgaria	7	12	0	19
Croatia	1	9	0	10
Czech Republic	2	13	0	15
Estonia	5	3	0	8
Hungary	9	13	0	22
Latvia	4	3	0	7
Lithuania	6	3	0	9
Poland	28	40	0	68
Romania	2	0	0	2
Slovakia	3	14	0	17
Slovenia	4	10	0	14
Turkey	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
Subtotal	74	130	0	204

III. LATIN AMERICA & AFRICA

Colombia	8	0	0	8
Cote d' Ivoire	7	0	0	7
Mexico	35	0	0	35
Panama	9	0	0	9
South Africa	0	15	0	15
Trinidad	9	0	0	9
Tunisia	1	0	0	1
Venezuela	<u>19</u>	<u>0</u>	<u>0</u>	<u>19</u>
Subtotal	88	15	0	103

IV. NEW INDEPENDENT STATES

Armenia	0	0	9	9
Azerbaijan	0	0	4	4
Belarus	0	0	6	6
Georgia	0	0	5	5
Kazakhstan	0	8	13	21
Kyrgyzstan	0	0	12	12
Moldova	0	0	18	18
Russia	2	70	61	133
Turkmenistan	0	0	13	13
Tajikistan	0	0	10	10
Ukraine	0	40	9	49
Uzbekistan	<u>0</u>	<u>0</u>	<u>14</u>	<u>14</u>
Subtotal	2	118	174	294

V. TOTALS	279	263	174	716
Percent of Total	39%	37%	24%	100%

ATTACHMENT B

COUNTRY	Estimated Budget FY 95	Estimated Budget FY 96	Number of Participants FY 95	Total Number Participants since 1984	Estimated Number Participants FY 96
Algeria	0	0	0	76	0
Barbados/Wi	0	0	0	11	4
Chile	0	51,000	0	0	9
Colombia	49,399	71,000	8	58	15
Cote d'Ivoire	24,635	21,000	7	140	6
Mexico	71,644	83,000	35	520	37
Panama	33,145	41,000	10	27	9
South Africa	30,000	10,000	0	0	0
Trinidad/Tob	17,045	16,000	9	70	7
Tunisia	23,196	26,000	1	1	10
Venezuela	<u>57,740</u>	<u>85,000</u>	<u>18</u>	<u>240</u>	<u>11</u>
REG TOTAL	306,804	404,000	88	1,143	108
Bulgaria	11,366	35,000	7	139	4
Croatia	30,000	33,000	1	12	3
Czech Republic	45,000	43,000	2	181	4
Romania	40,000	37,000	2	2	4
Slovenia	15,000	20,000	4	22	5
Slovakia	30,686	42,000	3	66	4
Turkey	<u>54,547</u>	<u>70,000</u>	<u>3</u>	<u>288</u>	<u>10</u>
REG TOTAL	226,599	280,000	22	710	34
Albania	0	0	0	31	0
Estonia	30,000	30,000	5	8	6
Hungary	30,084	35,000	9	113	10
Latvia	30,000	30,000	4	7	5
Lithuania	30,000	10,000	6	9	5
Poland	<u>100,000</u>	<u>150,000</u>	<u>28</u>	<u>394</u>	<u>28</u>
REG TOTAL	220,084	255,000	52	562	54
China	135,215	135,000	17	161	30
Hong Kong	16,051	0	6	47	0
Indonesia	60,000	105,000	12	12	16
Korea	116,742	115,000	21	167	20
Malaysia	71,905	100,000	18	137	20
Philippines	10,000	100,000	11	11	20
Singapore	17,330	0	6	113	0
Taiwan	60,000	0	8	99	0
Thailand	52,968	100,000	16	104	21
Vietnam	<u>—</u>	<u>80,000</u>	<u>—</u>	<u>0</u>	<u>5</u>
REG TOTAL	540,211	655,000	115	851	132
Russia	<u>69,500</u>	<u>30,000</u>	<u>2</u>	<u>2</u>	<u>3</u>
TOTAL	1,363,198	1,624,000	279	3,268	331

ATTACHMENT C

CHINA

In addition to forging strong relationships between USDA and leaders of China's food sector, there have been measurable direct increases in U.S. agricultural exports thanks to the 1995 Cochran Program in China.

NASDA/FMI Team: Once again a team of executives from China's young but rapidly expanding supermarket industry attended the NASDA/FMI show in Chicago, took a training course at Cornell University, and had additional programming in Washington, DC and Idaho.

All participants were enthusiastic about the experience, and report having learned things they can apply on a daily basis at their businesses. Only a few years ago there were no supermarkets in China; now new stores are opening on a weekly basis. Continued development of modern supermarkets plays a critical role in improving the distribution and sales of U.S. high-value products to China. Chinese on the program have continued to request information about U.S. products and suppliers. One participant organized a 13-store U.S. foods promotion immediately upon his return from the program; this led to tripling of his sales of U.S. products. Others plan to carry out similar promotions within the next year.

Seafood Team: A team of six seafood buyers spent three-weeks in September learning about the U.S. seafood industry on both coasts, and also attended a trade show. China is the world's biggest consumer of seafood, and rising incomes simultaneously increase demand and deplete domestic supplies. Team members all expressed surprise at the size and variety of U.S. seafood supplies. Several species that the U.S. produces but does not commonly consume are desirable in China, so price is less of a problem than expected. The team returned only a month ago, but already several six-figure deals are being negotiated. (Agricultural Trade Office Guangzhou: November 3, 1995)

EY 93 Meat and Poultry Processing: "I should say I've been enlightened by what I saw and learned, especially the methods of management in US enterprises are helpful to the Chinese managers like myself. Some of these management ideas are at present being conducted in my corporation.

So far we've had business with 3 American companies: Tyson, AJC and Cooking Good, involving 160 containers, valued a USD \$3 million. I have kept in contact with some nine US suppliers or processors. Generally, sales contracts could be concluded provided that the prices are acceptable to the Chinese market." (Li Cai, Vice President, Xiamen Sez Foreign Trading Company: March 13, 1995)

KOREA

A three-week Food Safety team that involved technical officials from food quarantine offices at the two major port cities. Though every effort is made to make these Food Safety teams an annual part of the Korean Cochran Program, this year's team was especially important given the two food safety trade issues that the U.S. Government (USG) is currently negotiating with the Korean Government (ROK/G) under the auspices of the Sanitary and Phytosanitary Standards (SPS) set

forth under the New World Trade Organization (NWTO). Providing a Cochran Program for quarantine officials provided tangible evidence to the ROKG that the U.S. is willing to cooperate with them in improving their food safety system and making it consistent with international standards and practice as required under SPS/NWTO. (Agricultural Affairs Office, Seoul: November 6, 1995)

PHILIPPINES

"Fiscal Year 1995 was the first year the Philippines has participated in the Cochran Program. Although we are still awaiting results from the teams that traveled in September, our Wood Buyers Team in April resulted in additional U.S. forest product sales and our May FMI and Cornell Team has resulted in new promotional possibilities for U.S. retail food products." (Agricultural Affairs Office, Manila: November 7, 1995)

"Got some feedback from Frank Manalo about the excellent program on wood. Since the program, Frank has ordered two container loads from North Carolina and Washington State amounting to some US\$35,000, and is under negotiation with (another U.S. company) for another container load. Because of what he learned in the program, Frank believes he will be able to sell U.S. wood faster and more effectively." (Agricultural Affairs Office, Manila: June 13, 1995)

COLOMBIA

"Review of FY 95: Four participants attended the Food Show in Chicago. Two have been contacted and have commented on the excellent contacts they made during the trip. One of them is about to make final arrangements with an American firm to represent them in Colombia. He is also in the process of establishing a student interchange agreement between the St. Joseph University in Philadelphia and the La Sabana University in Bogota. The interchange of students will be in the field of agribusiness. Another participant made contact with Mother Cookies Company and hopes to import cookies with a commercial value of \$500,000 per year. Another participant has made popcorn imports for a commercial value of \$250,000 this year and next year hopes to start with imports of institutional sizes for the food service sector. More details will follow. (Agricultural Affairs Office; Bogota: October 11, 1995)

FY 92 Poultry Science: "My company, Solla, has a subsidiary that buys grains and soybeans in the USA and other countries. As a result of my program, I gave them some information that has been very useful.

We are trying to implement some of the technologies seen in the training that are applicable to Colombia. For example, outdoor swine production. We also have a contract with (a US company) to sell their animals in Colombia, Ecuador, and Venezuela. The contacts and companies we met in our training will always be our first option in any future business of the company." (Juan Jaramillo, Marketing Manager of Solla, SA: 1992 participant: November 3, 1995)

MEXICO

Meat Inspection: For the past three years, the Cochran Program has sponsored training of Mexican veterinarians in the inspection of meat and meat products. This training has enabled the Mexican Directorate of Animal Health to develop a cadre

of well-trained inspectors, permitting the inspection of U.S. meat and poultry products to proceed smoothly and efficiently. Meat exports to Mexico have totaled \$2.1 billion over the past three years. An important ancillary benefit of this training has been to build a network of contacts and an atmosphere of mutual trust between U.S. meat inspection and veterinary health authorities and those of Mexico, greatly facilitating the negotiation of solutions to a number of important trade disputes. (Agricultural Affairs Office, Mexico City: November 6, 1995)

Sheep Breeding: "We believe we had an excellent two weeks with the Mexicans. They trained hard and went home extremely tired. We also hope to be sending 100-500 units to them and their clients in Mexico. If this comes to pass in any of the ways we hope it will, we are confident it will simply be the beginning of long, beneficial relationship with Elite Genetics and our Mexican friends." (David Kloostera, Marketing Director, Elite Genetic; July 25, 1995)

PANAMA

FY 93 Dairy Herd Management: "As a result of this training my life has changed, because now I know how to carry out my farm in the best way, with the best results, and also for my cooperative. My training was in dairy herd management and in this field we are buying semen from USA companies. Another (cooperative member) was in the USA on the Cochran Fellowship Program in cheese making. We are importing some sub-products from the USA to process milk and to make cheese. A representative from the Holstein Association visited Panama on January 9 (to conduct) a training for many dairymen to carry out a program on record keeping. This visit will open opportunities in business, research and trade, as to my point of view." (Nelson Barrera of Silos de Honda, a dairy cooperative in Los Santos, Panama, regarding his 1993 training: May 22, 1995)

VENEZUELA

FY 93 Livestock, Meat Inspection, and Marketing: "Since my training, we have been using USDA criteria for grading carcasses and live animals in our research work. We also have been dealing with setting up new grading standards for Venezuela. I served as the promoter for establishing an agreement between USDA and its counterpart MAC (Ministry of Agriculture) in Venezuela. MAC passed (October 22, 1994) a decree declaring a new grading system for beef carcasses and live cattle based on similar criteria to that used by USDA. We have also initiated cooperative efforts to implement a market news program in Venezuela that is similar to USDA's Agricultural Marketing Service." (Dr. Nelson Huerta, Agricultural Faculty Director, University of Zulia: March 13, 1995)

COTE D'IVOIRE

FAS/Abidjan and ICD/Washington utilized the Cochran Fellowship Program to enhance opportunities for U.S. agricultural exports to West Africa. In September 1995, an agricultural exports team of bankers program exposed three West African bank vice presidents to USDA programs, U.S. agriculture, and the U.S. agricultural export industry. These bankers are often the front-line salesmen for the GSM-102 program and now they will be better equipped to discuss import opportunities with their clients. We have already had two inquiries on vegetable oil and milk powder

as a result of this program. The Senegal participant is playing a leading role in organizing financing for U.S. rice imports as the private sector replaces the state importer. (Agricultural Affairs Office, Abidjan: October 30, 1995)

CZECH REPUBLIC

EY 93 Cotton Classification: "In the Cotton School I learned how to buy, specify quality and have cotton shipped. After completion of the Lubbock seminar we have increased purchasing U.S. cotton by 25%. I bought 1,261,154 kgs or 5,785 bales of U.S. cotton in 1994. My company, Perla s.a., has expanded. The expansion has been a result of closer cooperation with U.S. cotton suppliers on quality planning. Perla company obtained the US COTTON MARK as the first company from the former Eastern Block in 1994. We are purchasing quality cottons from U.S. cooperatives. Together with Adolph Hanslik Cotton Company we have realized the first direct transport of cotton "from the Texas field to Czech Mill." Some new products have been added to our collection because of the use of certain U.S. qualities. Using the US COTTON MARK enables us to increase our sales to the Western Europe market. I have maintained close contact with cooperatives in California, Arizona and Texas and with members of the Lubbock Cotton Exchange which I met during my training period." (Alois Bohac, Perla A.S.: March 1, 1995)

HUNGARY

EY 93 Dairy Genetics and AI/ET: "Some of the new knowledge I learned in the U.S. has been included in the new technical-legal regulations (the technical contents of the Animal Breeding Act and its enacting clauses.) These changes occurred as a result of our government policy and are not of a discriminative character. According to the new Animal Breeding Act, it decrees that import shipments of deep frozen semen and embryos are subject to central state quarantine, irrespective of the country of origin. Our quality control is similar to the U.S. Control Service. Our quality requirements can be correctly met by the developed countries, consequently they have no restrictive effect on imports. During the last period, the use of U.S. semen represented 10% of the total Hungarian interior trade, and has increased proportionally in dairy husbandry.

Previously impersonal contacts with the leading semen exporters (World Wide Sires, ABS), and research organizations (Cornell University, USDA/APHIS) I met during my training have now become operative and actual." (Dr. Ferenc Flink, Head of Department, Nat'l Institute for Agricultural Quality Control: October 18, 1995)

POLAND

U.S. lumber exports to Poland from January through July 1995 amounted to \$1.4 million, in comparison to \$21,000 for the same period in July 1994. This level is Poland's highest level of imports of U.S. lumber since at least 1970. Krzysztof Jarzecki, a participant in the 1993 Cochran-sponsored housing construction team said, "I am convinced that this astounding growth was partially a result of purchases made by participants of the Cochran Wood Housing Construction Seminars". (Agricultural Affairs Office, Warsaw: November 3, 1995)

SLOVENIA

Poultry Processing: "Successes: (1) Processing Equipment: Saso was looking for further processing equipment and I was able to put him in contact with five major companies. I believe he will purchase in the near future; (2) Franchising: His meeting with Church Chicken was very good. Their Vice-President of International Franchises plans a visit to Slovenia in March; (3) Poultry Meat Suppliers: We had several discussions with food brokers regarding supplying turkey meat for further processing: sausages, wieners, etc." (Wayne Seeney, Vice President, JoWay Inc.: January 24, 1995)

"For your information, Saso Vrzic has requested prices for 20 metric tons of turkey meat for further processing. Also at the invitation of Saso, a staff of America's Favorite Chicken Company (Popeyes and Church's franchisor) plans to visit Slovenia in early March. I will let you know the outcome." (Wayne Seeney, Vice President, JoWay Inc.: March 29, 1995)

"Vrzic attended the White House Conference in Cleveland, then went to Florida and Georgia. Regarding his program he wrote the following (on March 31): "The (Cochran) Program afterwards fulfilled my expectations. A few contacts developed for promising business. We already bought some chicken boning equipment (from Marif, Inc.). We are in contact with American Favorite Chicken (Church's Chicken) regarding our discussion about franchising Texas Chicken restaurants for Slovenia. For that purpose the vice president of AFC visited JATA on March 1." (Agricultural Affairs Office, Vienna: May 11, 1995)

Commodity Exchange Operations: "Our biggest success from 1994 is the just opened (March 15, 1995) Ljubljana Futures Exchange, the general manager and director of commodities trading of which were 1994 Cochran Fellows. Their Cochran Program--in futures trading--led directly to the development of the exchange." (Agricultural Affairs Office, Vienna: May 11, 1995).

NOTE: J.B. Grant and staff from the Chicago Board of Trade who participated in this training were invited to and attended the opening of the Ljubljana Future Exchange.

TURKEY

Flour Milling: "Further to my visit to the USA last May, under the Cochran Fellowship Program, I have made many inquiries in the field of flour milling, and in other agribusiness sectors.

Through the contacts I made, I have recently acquired the sole distributorship of the Elf Atochem North America Services for importing flour and dough improvers. We are carrying on many tests in the Turkish market for the implementation of Elf improvers in our baking and milling sectors. We are about to place orders for distribution.

I am working on two different projects with American firms. First one is on establishing a small brewery for producing exotic beers which are not accustomed in Turkey yet. I am even planning to open a Pub Brewery in the future. We have already reserved a historical building for this purpose. My second project is on Chili-style food. The samples I brought with me have been tested and found to be very customer attractive.

In the flour milling sector, the recent wheat harvest was not really promising due to too much rain, and the bug damage experienced before ripening of the wheat kernels. We are currently working on gathering a group for importing HRS and DNS wheat with high protein contents from the USA, with the intention of blending with our wheat. The other important line of business would be importation of wheat seeds. I am planning to make further contacts on this with the Turkish Ministry of Agriculture in the near future. " (Faith Cakmakoglu, Managing Director, Kadioglu Degirmencilik A.S.: October 20, 1995)

FAS OVERSEAS OFFICE STRUCTURE

Question. FAS utilized additional funding provided to it for fiscal year 1996 to initiate a program to consolidate and expand its agricultural counselor/attache and trade offices overseas. Additional funds are requested for fiscal year 1997 to continue this expansion.

What level of fiscal year 1996 funding was used to expand FAS' overseas office structure? Please indicate which of the specific fiscal year 1996 requests were funded.

Answer. A total of \$700,000 will be used during fiscal year 1996 to begin the consolidation and transition of our overseas presence from mature markets to emerging growth markets in East Asia and the Pacific Rim. In this regard, during fiscal year 1996 we are taking action to reduce staff levels in Denmark, France and Brazil and expand resources in Indonesia and Japan.

Question. Does FAS have a plan for expansion of its overseas offices? How does the proposed overseas office structure meet the export expansion goals of USDA?

Answer. FAS office expansion is focused on markets with the largest immediate agricultural import growth potential for the United States based on recent trade performance, and other "emerging markets" whose population and income growth statistics suggest that they will also offer growth in the next few years. The USDA Long Term Agricultural Trade Strategy (LATS) provides the analytic tools for identifying these markets.

Question. How are decisions being made on which offices to expand or reduce, where new agricultural trade offices and new agricultural counselors/attaches should be located, etc.?

Answer. Decisions are being made through a review process which begins with soliciting suggestions from FAS staff both in Washington and in the field for increases and decreases in staffing which might make a positive contribution to the FAS mission. These proposals are reviewed at the staff level in relation to both management and program delivery considerations, and then considered by senior FAS staff to establish priorities. Final decisions on whether or not to increase or decrease staffing are made in the context of current and projected funding availability. Agricultural Trade Offices are opened in countries where the desirable level of market development activity exceeds what can be handled by a single office in the U.S. embassy in the capital city. Staffing reductions are made as necessary in countries with limited potential as markets for U.S. products to free up

positions and budget resources for offices in countries with greater trade potential.

Question. How are locations determined? Is there private sector input?

Answer. The agency uses a variety of analytical tools, including measures of current office workload and trade projections to guide its decisions. New attache offices are opened in countries where trade growth prospects are expected to create an important demand for FAS reporting, trade negotiation, and market development activities. The agency consults informally with market development cooperators and other trade organizations with which it has contact concerning the location of its offices overseas, but there is no formal mechanism for input from private sector organizations, each of which is likely to have a different view about which markets are most important, depending on their specific commodity trade interests.

Question. What flexibility does FAS have to shift its overseas resources and how have you shifted your resources to respond to changes in the international market?

Answer. In the short term, FAS's ability to shift resources is constrained by the National Security Decision Directive 38 (NSDD-38) procedure that gives the State Department and the Ambassador in each country a deciding voice in whether other agencies may increase or decrease American and foreign national staffing at each post. Increases are sometimes opposed, particularly where regional coverage is concerned, by Ambassadors who feel that additional staff may excessively burden administrative services in the country which serves as the regional base. Ambassadors may also resist decreasing American staff in countries to which USDA gives lower priority because agriculture is an important feature of bilateral relations with those countries. In the longer run, it is usually possible to obtain State Department approval for strategic redeployment of resources. The general direction of FAS resource shifts over the past two decades has been out of Western Europe and into the high-growth markets in the Pacific Rim.

Question. Please provide a summary of how FAS' overseas office structure (including Counselor and Attache offices and Agricultural Trade Offices) has changed over the past ten years and what changes are proposed beyond fiscal year 1997.

Answer. The following table groups offices in three categories: those headed by American officers (Attaches or Counselors) who are the senior USDA officials in their respective countries, Constituent Posts headed by subordinate American officers or foreign national staff, and Agricultural Trade Offices.

FAS FIELD OFFICES IN 1987 AND 1997 (PROJECTED) BY REGION

	<u>Attaches/ Counselors</u>		<u>Constituent Posts</u>		<u>Trade Offices</u>		<u>% Share of Total Staff</u>	
	<u>87</u>	<u>97</u>	<u>87</u>	<u>97</u>	<u>87</u>	<u>97</u>	<u>87</u> <u>1/</u>	<u>97</u>
Western Europe	15	9	3	5	2	2	27	22
Eastern Europe/FSU	5	4	2	8	0	1	9	8
Middle East & Africa	7	7	5	7	6	1	17	14
Western Hemisphere	12	11	2	6	1	2	20	22
South & Southeast Asia	8	9	1	2	1	2	13	14
North Asia	<u>4</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>4</u>	<u>7</u>	<u>14</u>	<u>20</u>
TOTAL.....	<u>51</u>	<u>44</u>	<u>13</u>	<u>28</u>	<u>14</u>	<u>15</u>	<u>100</u>	<u>100</u>

1/ Does not include contract employees; slightly understates employment in Pacific Rim countries in 1987.

The gradual movement towards a smaller number of larger regional posts, with more constituent posts with one to three local employees, is expected to continue after 1997. Expansion will continue to focus on growing markets in the Pacific Rim and Latin America.

INTERNATIONAL MARKETPLACE

Question. Mr. Schumacher, you report on the continued strong growth of U.S. agricultural exports. However, could you please tell me if the United States is maintaining market share, i.e., are we keeping up with the growth in the overall world markets?

Answer. The issue you raise regarding U.S. competitiveness is an important one. Since passage of the 1985 Farm Bill, the U.S. share of world agricultural trade has expanded substantially, largely reversing the decline experienced from 1981 to 1985. In 1986, the U.S. share of world trade (excluding EU intra-trade) was 17 percent. Since then, our share has steadily expanded and we estimate it will reach 22-23 percent this year. We are very pleased with the turnaround over the past decade and attribute it to a number of factors. These include USDA's export programs, the lower value of the U.S. dollar since 1985, the emergence of the United States as a major competitor in the world market for high value products, and the resurgence of our exports of bulk commodities, especially grains and soybeans, over the past two years.

Question. Last year, we talked about the fact that our major agricultural competitors had increased their efforts to take advantage of a more liberalized trading environment under the NAFTA and GATT agreements. You have been monitoring this. What have you found?

Answer. We have seen a number of initiatives in the European Union (EU) and other countries to position themselves to be more competitive in the new trading environment. For example, the EU is continuing to reform its support programs for commodities other than grains and oilseeds in an effort to make them

more cost effective and reduce the cost of their programs. The EU has also launched bilateral initiatives to establish closer trade ties in Latin America and Asia. In addition, the EU is discussing setting up its own "MPP" program to supplement the existing, very successful programs operated by individual member states. Australia and Canada are also reexamining their domestic support policies to establish "green box" programs which will not be subject Uruguay Round reduction requirements. For example, Canada has eliminated its rail subsidies, which will lead to a more rational, competitive transportation sector in the long run. Australia has converted its export subsidies for dairy to a system of domestic taxes and tax rebates which are being phased down over time.

Question. I assume our competitors are also monitoring what we are doing. Have they duplicated any of our programs?

Answer. Each Member Country of the WTO is required to report any changes or additions to its trade policy regime to the Trade Policy Review Body or to one of the twelve committees, including the Committee on State Trading Enterprises, that report to the General Council of the World Trade Organization. FAS closely monitors these submissions to determine their GATT consistency. In the course of these reviews and to the best of our knowledge, we have not detected that our competitors have duplicated any of our programs other than the EU discussing setting up its own "MPP" program. The United States is an active participant in all WTO Committees. If any Member's practices are determined to be inconsistent with the WTO, the United States will not hesitate to raise its concerns in this multilateral forum or through bilateral dialogue.

USE OF FY 1996 INCREASES

Question. The fiscal year 1996 appropriations act provided increased funding to enable the Foreign Agricultural Service to expand a number of its trade and export promotion programs. The Committee specifically indicated that it had the additional \$2 million requested for the Cooperator Program, the net increase requested for International Cooperation and Development, and then told FAS to utilize the remaining additional funds for the budget increases it proposed which had the greatest potential of expanding U.S. agricultural exports and enhancing American agriculture's ability to compete overseas. How did FAS utilize these additional funds?

Answer. In addition to the funding provided by the Committee for the Cooperator Program and International Cooperation and Development activities, the increased appropriations in fiscal year 1996 allowed for expansion of our trade show and trade mission activities. To confront what is rapidly emerging as the most important type of non-tariff barrier--sanitary and phytosanitary standards--a Sanitary and Phytosanitary (SPS) trade policy team was established.

Additional funds in fiscal year 1996 allowed FAS to initiate a program to consolidate and expand our agricultural counselor/attache and trade offices overseas, with an increased emphasis on market development activities in key emerging markets. During fiscal year 1996, we have begun to focus on domestic outreach efforts by establishing the FAS Home Page on the World Wide Web and by placing FAS employees on temporary duty status in strategic locations around

the United States to facilitate the entry of small-and medium-sized producers into the export market.

GREENBOX FUNDING

Question. The Department indicated that its fiscal year 1997 budget proposes an increase of almost 10 percent over 1996 to enable the Foreign Agricultural Service to expand its trade and export promotion programs as part of the Administration's "greenbox" initiatives. How will the increased funding be utilized to enhance U.S. agriculture's ability to compete and expand its share of the international marketplace?

Answer. The budget proposes a number of "greenbox" increases which are intended to build on the increased funding which has been provided in the 1996 appropriations act. Specifically, these increases include:

- \$4.2 million for the continued expansion of FAS overseas attache and trade offices;
- \$4.0 million to increase the FAS contribution to the Foreign Market Development Cooperator Program;
- \$1.5 million to expand the Federal/State Market Improvement Program to provide matching grants to State Departments of Agriculture to develop innovative marketing techniques for use in international markets;
- \$1.5 million for a new Distributor Development Program which is designed to develop marketing strategies for specific groups of agricultural products with a high market potential in fast-growing overseas markets;
- \$0.3 million for additional staff for the Office of the General Sales Manager to administer the expanded level of supplier credit guarantees.

We are proposing an increase of \$150.0 million in the level of supplier credit guarantees to be made available by CCC to facilitate increased sales of processed and consumer-ready U.S. agricultural products. Although part of the "greenbox" initiative, this increase is separate from the FAS appropriations request.

Question. What is the total amount of funding requested for the "greenbox" initiatives for fiscal year 1997? How does this compare to the fiscal year 1996 level of funding for these initiatives?

Answer. The fiscal year 1997 budget includes a total of \$265.5 million for "greenbox" initiatives, which compares to program level increases of \$195.2 million requested in the fiscal year 1996 budget. Of the fiscal year 1997 requested amount, \$15.5 million is for discretionary programs and \$250 million is for mandatory programs. The fiscal year request included \$35.2 was for discretionary programs, and \$160.0 million was for mandatory programs. It is important to note that these are program level increases above fiscal year 1995 enacted levels; fiscal year 1995 is the base year against which our "greenbox" increases are measured.

Question. With reference to the object class table on page 19-7 of the Explanatory Notes, please explain each increase/decrease proposed from fiscal year 1996 to fiscal year 1997.

Funding by Object Class	Activity	FY 1997 Increase
11/12 Personnel Comp.	Pay cost and contribution to retirement Post expansion Suppliers Credit administrative support Administrative reduction TOTAL	+\$1,228 + 874 + 209 <u>- 725</u> +1,586
21 Travel	Post expansion	+ 50
23.2 Rental Payments	Post expansion	+1,998
25 Other Services	Cooperator Program Pay cost and contribution to retirement Post expansion Suppliers Credit administrative support Federal/State Market Improvement Program Distributor Development Program TOTAL	+ 4,000 +352 +696 +100 +1,500 <u>+1,500</u> +8,148
26 Supplies and Materials	Post expansion Suppliers Credit administrative support TOTAL	+ 180 <u>+11</u> + 191
31 Equipment	Post expansion Suppliers Credit administrative support TOTAL	+ 380 <u>+25</u> + 405
	GRAND TOTAL	+\$12,378

SANITARY/PHYTOSANITARY ISSUES

Question. During his testimony before this subcommittee, the Secretary noted that sanitary/phytosanitary issues would increasingly challenge U.S. agricultural access to markets.

How does FAS plan to address these challenges? Is the FAS Sanitary and Phytosanitary trade policy team funded for fiscal year 1996 now in operation? How is it working?

Answer. In June 1995, the Foreign Agricultural Service initiated an SPS Working Group that meets every Tuesday to review the status of SPS issues that

are currently threatening or have stopped U.S. agricultural exports. This group, which includes representatives from the Animal Plant Health Inspection Service, the Food Safety Inspection Service, the Agricultural Marketing Service and the Economic Research Service, tracks SPS trade issues which have been raised by our overseas posts and industry contacts. The group discusses what actions have been taken to address the issue and what additional steps need to be taken to keep trade moving.

To facilitate the work of this group, FAS has directed fiscal year 1996 funds toward additional staff and budget resources for the Office of Food Safety and Technical Services. These funds have been used in several ways, such as to initiate bilateral biotech talks with the Japan's Ministry of Health and Welfare and Ministry of Agriculture, Fisheries and Food. We have also used these funds to contract the services of technical experts to help us address trade constraints associated with non-acceptance of food additives approved for use in the United States, but not overseas.

Question. To what extent do we encounter quality problems with U.S. agricultural products for export and what is the FAS doing to resolve these problems?

Answer. The United States is recognized globally as producing the world's safest and highest quality food products. Several countries, such as Australia and Ireland, have initiated export promotion campaigns that have highlighted their food products as being "clean and green" in order to compete with U.S. food products. The Department of Agriculture assures quality of our agricultural products in many ways through the development of standards and where required quality certification. Authority for grains rests with the Grain Inspection, Packers and Stockyards Administration. Quality issues on other food products generally fall within the purview of the Agricultural Marketing Service. When our overseas offices become aware of a specific problem, they inform the appropriate regulatory agency.

MARKET ACCESS PROGRAM (FORMERLY MARKET PROMOTION PROGRAM)

Question. What have been the benefits of the MPP (which has now been renamed the MAP in the farm bill) in expanding international export markets for U.S. agricultural products. What are the latest findings?

Answer. MPP and its predecessor, the Targeted Export Assistance (TEA) program, have been the cornerstone of USDA's global market development strategy since 1986, especially for high-value products such as meats, fruits and vegetables, and processed grocery products. In 1995, after 10 years of investment in the international competitiveness of U.S. agriculture, the U.S. share of world high-value trade has increased by 4.4 percentage points. U.S. exports have also increased by \$4.6 billion and supporting economic activity has grown by another \$7.5 billion. In addition, the export expansion has raised U.S. farm income by over \$850 million in 1995 and supported 66,000 well paying jobs for U.S. workers throughout the economy. Roughly 40 percent of those jobs were on the farm while the remainder were in industries like food processing, non-food manufacturing,

transportation, and services. These results confirm USDA's long held belief that when U.S. agriculture wins abroad, the entire economy shares in the benefits.

It is important to note that these impacts reflect MPP private sector promotion's short and long term market development effects and are separate and distinct from other economic factors such as the lower value of the U.S. dollar, trade liberalization, income growth abroad, and population growth. If this market development investment had not been made over the past 10 years, our analysis suggests that U.S. agricultural exports may have only been \$51.2 billion in 1995 instead of the \$54.1 billion that was actually reported.

PARTICIPATION IN MPP

Question. Since the fiscal year 1996 Agricultural Appropriations Act changed the eligibility criteria for the Market Promotion Program (MPP), have any groups been excluded from participation? Have there been any problems?

Answer. The fiscal year 1996 Agriculture, Rural Development, Food and Drug Administration and Related Agencies Appropriations Act eliminated direct assistance to mink trade associations, large for-profit corporations and foreign for-profit corporations. Consequently, the Department can no longer enter into agreements with the U.S. Mink Export Development Council and those large companies previously eligible for participation in the Export Incentive Program, a component of the MPP. However, they may still be eligible for assistance through the trade association. Because these restrictions take effect with the 1996 program, it is difficult to assess their full impact at this time.

Question. Please provide for the record the MPP allocations for each of fiscal years 1995 and 1996.

Answer. The list of MPP allocations for fiscal year 1995 is provided. We expect the fiscal year 1996 allocations to be announced the first week of May.

MARKET PROMOTION PROGRAM ALLOCATIONS, FISCAL YEAR 1995

<u>Nonprofit Applicant Organizations</u>	<u>Allocation</u>
Alaska Seafood Marketing Institute	\$3,520,000
American Brandy Association	\$220,000
American Forest & Paper Association	\$7,700,000
American Seafood Institute	\$360,000
American Sheep Industry Association	\$440,000
American Soybean Association	\$1,280,000
Asparagus U.S.A.	\$330,000
California Agricultural Export Council	\$500,000
California Cling Peach Advisory Board	\$780,000
California Kiwifruit Commission	\$160,000
California Pistachio Commission	\$1,090,000
California Prune Board	\$2,090,000
California Strawberry Commission	\$600,000
California Table Grape Commission	\$2,570,000
California Tomato Board	\$480,000

California Tree Fruit Agreement	\$910,000
California Walnut Commission	\$2,830,000
Cherry Marketing Institute	\$200,000
Chocolate Manufacturers Association	\$2,500,000
Cotton Council International	\$8,820,000
Eastern U.S. Agricultural and Food Export Council	\$3,680,000
Florida Department of Citrus	\$5,410,000
Ginseng Board of Wisconsin	\$190,000
Hop Growers	\$65,000
International Apple Institute	\$530,000
Jojoba Cooperative Association	\$170,000
Kentucky Distillers' Association	\$1,050,000
Mid-America International Agri-Trade Council	\$5,650,000
National Association of State Departments of Agriculture	\$500,000
National Dairy Promotion and Research Board	\$800,000
National Dry Bean Council	\$320,000
National Honey Board	\$75,000
National Peanut Council	\$850,000
National Potato Research & Promotion Board	\$1,110,000
National Renderers Association	\$290,000
National Sunflower Association	\$1,130,000
New York Wine and Grape Foundation	\$170,000
Oregon Seed Council	\$95,000
Oregon-Washington-California Pear Bureau	\$1,300,000
Pacific Northwest Wine Promotion Coalition	\$410,000
Pet Food Institute	\$1,230,000
Raisin Administrative Committee	\$2,510,000
Southern United States Trade Association	\$3,980,000
Texas Produce Export Association	\$125,000
The Catfish Institute	\$280,000
The Popcorn Institute	\$590,000
US South Africa Trade Association	\$160,000
U.S. Feed Grains Council	\$3,220,000
U.S. Livestock Genetics Export Inc.	\$1,120,000
U.S. Meat Export Federation	\$9,220,000
U.S. Mink Export Development Council	\$1,610,000
U.S. Surimi Commission	\$260,000
U.S. Wheat Associates	\$1,810,000
U.S.A. Dry Pea and Lentil Council	\$390,000
U.S.A. Fresh Sweet Cherry Promotion	\$870,000
U.S.A. Poultry and Egg Export Council	\$1,440,000
U.S.A. Rice Federation	\$4,290,000
Washington State Apple Commission	\$3,730,000
Western United States Agricultural Trade Association	\$5,120,000
Wine Institute	\$3,990,000

Export Incentive Programs

-Almonds	\$950,000
-Cal-Az Citrus Industry	\$1,430,000
-Cranberries	\$140,000
-Processed Corn	\$110,000

DISTRIBUTOR DEVELOPMENT PROGRAM

Question. The fiscal year 1997 request proposes \$1.5 million for what is described as Phase I of a new three-year Distributor Development Program. The budget justification materials indicate that this program will develop strategies that will be implemented over a three-year period for groups of products, such as fresh produce and seafood, which have particularly high potential in specific markets to enable us to get ahead of our competitors and firmly establish distribution of U.S. foods in key growth and emerging markets.

Would you please explain the purpose of this program more fully, why you have determined this program is needed, and how it would operate. Why can't this assistance be provided through the Foreign Market Development and Market Access (former MIP) programs? Is specific legislative authorization required for this program?

Answer. The Distributor Development Program (DDP) focuses on strategies to address the lingering problem that in key emerging markets, such as Latin America and Asia, effective distribution of U.S. food products is constrained by such factors as poorly developed marketing systems for food products, and a lack of information on how to buy and market U.S. products.

Program efforts will be directed at getting importers and exporters to work together to develop an effective in-country distribution system for U.S. food products, which would in turn provide an avenue for effective market development campaigns.

The DDP will employ a three year strategy focusing on Market Research, Domestic Outreach - Buying Missions, and U.S. trade association promotions

MARKET RESEARCH: In FY 1997, \$1.5 million will be expended on market research in two to four key market regions focusing groups of products such as fresh produce and seafood which have particularly high potential in key markets. This research will examine:

- which U.S. products would be most price competitive,
- how U.S. products would need to be adapted to meet local needs,
- how products are distributed.

DOMESTIC OUTREACH - BUYING MISSIONS: In year 2, using the results of the market research, the following activities will be carried out:

-- Conduct an education campaign for U.S. exporters, with emphasis placed on small and medium-sized companies to provide them with the research results through outreach efforts such as seminars at trade association meetings and articles in trade publications.

- Lead traveling marketing workshops and food showcases for local food

distributors which would provide technical seminars on how to buy and market U.S. foods, as well as a showcase of U.S. products available for export. The showcase would travel to two, three or four markets in a region, and include an educational program on local markets for U.S. exporters.

-- Conduct buying missions to bring leading foreign distributors to U.S. trade shows where they would see U.S. products.

U.S. TRADE ASSOCIATION PROMOTIONS: In year 3, once distribution channels are established, transitional promotional funds would be provided for one year to encourage participants to develop cost-effective, jointly implemented strategies. Further promotions would be handled by industry groups under existing market development authorities including MAP and FMD.

The Distributor Development Program complements the Market Access Program by providing the "road map" to the export market. The MAP encourages the development, maintenance and expansion of commercial export markets for agricultural commodities through cost-share assistance to eligible trade organizations.

The Distributor Development Program can be operated within existing legislative authorities.

Question. If approved, do you envision that this program would continue to be funded at a \$1.5 million level in its second and third years?

Answer. Yes, the cost of each three-year program per group of products per regional market would be approximately \$700,000. Of that total, second and third year costs on a per year basis would be approximately \$250,000. The request for \$1.5 million is in support of Phase I efforts only.

Question. What types of agricultural products do you intend to promote under this program?

Answer. We feel groups of products like fresh produce and seafood have particularly high potential in key markets and would focus our efforts on them. For example, a strategy might be developed for fresh produce in Brazil and Argentina, or for food ingredients in Indonesia, Thailand and Malaysia. To avoid duplication with existing market development programs by industry organizations and regional State trading groups, the program would focus on a product grouping which is currently handled by more than one Market Access Program participant. The Distributor Development Program would take advantage of natural efficiencies in conducting market research and developing distribution for groups of products in the initial stages of market development. Once distribution has been established, further promotions would be handled by specific commodity groups under the Market Access Program. However, transitional promotional funds would be provided for one year to encourage participants to develop cost-effective, jointly implemented strategies.

UNDER SECRETARY, FFAS, TRAVEL

Question. Please provide a detailed list of all foreign travel taken by the Under Secretary or any employee of that office, or the head of the Farm Service

Agency, including: duration, destination, cost, purpose, and account charged for cost of the travel, and the number of employees accompanying the individual. Also provide information on foreign travel of all employees of the Farm Service Agency to include number of trips, total cost and account charged, summarized by major categories for the purpose of travel, e.g., research or fieldwork, to attend meetings, etc.

Answer. We will provide that information of foreign travel taken during the past year for the record.

NAME	DESTINATION/ DURATION	PURPOSE/ COST
Smith, Dallas	Dakar, Senegal April 29-May 6, 1995	U.S. Presidential Mission to the Third Africa-African American Summit. Participation in the Agriculture Workshops about programs and projects in Africa. \$5,059
Vickers, Eugene	Seoul, Korea; Manila, Philippines; Hong Kong; April 12-22, 1995	Meet with government and industry officials and attend Attache Conference. \$4,858
Schroeder, James	Seoul, Korea; Manila, Philippines; Hong Kong; Beijing, China; April 12-27, 1995	Meet with government and industry officials and attend Attache Conference. \$6,032
Moos, Eugene	Seoul, Korea; Manila, Philippines; Hong Kong; April 12-22, 1995	Meet with government and industry officials and attend Attache Conference. \$4,859
Schroeder, James	Frankfurt, Germany; Minsk, Belarus; Kiev, Ukraine; Tbilisi, Georgia; Yerevan, Armenia Feb. 4-12, 1995	Collect information of assistance needs in Ukraine, Georgia, Armenia, and Belarus. \$4,832
Moos, Eugene	Dubai, UAE; Riyadh, Saudi Arabia; Amman, Jordan Jan. 12-24, 1995	Attend Saudi Food Show and meet with government and business officials. \$7,090

Schroeder, James	Rome, Italy Nov. 12-17, 1994	Attend the FAO Council Meeting. \$1,917
Moos, Eugene	Vienna, Austria; Paris, France; Brussels, Belgium; Warsaw, Poland Oct. 18-29, 1994	Address U.S. Feed Grains Council Marketing Conference. Attend official opening of FAS Pavilion at SIAL. \$5,026
Hicks, Vicki J	Vancouver, British Columbia Feb. 7-13, 1995	Make a presentation before U.S.- Canada Joint Commission on Grain. Present speech to Protein Grain Products International. \$1,787.70
Stickles, George A.	Ottawa, Canada Mar. 25-31, 1995	Exchange with Canadian Parliamentary Internship Program. \$1,197.55
Gill, Steve P.	Ottawa, Canada Mar. 13-14, 1995	To attend Joint U.S. and Canadian Grain Commission. \$675.00
Sally Nunn	Hanoi, Vietnam Oct. 1-9, 1995	Negotiate bilateral agreement between U.S. and Vietnam \$4623.94
James Firth	Rome, Italy Dec. 6-10, 1994	Meet with European Union to coordinate food assistance to the Transcaucasus \$1699.39
Vicki Hicks	Rome, Italy Dec. 6-10, 1994	Meet with European Union to coordinate food assistance to the Transcaucasus \$1453.94
Sabri Gerguis	Addis, Ethiopia Dec. 4-18, 1994	Investigate sorghum quality discrepancy at request of AID \$4926.42
Douglas Frye	Namibia, So. Africa, Botswana, Zimbabwe, Mauritius Feb. 3-25, 1995	Analyze financial risk of foreign banks for GSM program \$10,068.28

Ted MacLaughlin	Honduras, Guatemala, El Salvador, Panama Jan. 22-Feb. 4, 1995	Assess credit worthiness of foreign banks \$3242.81
James Firth	Port au Prince, Haiti Jan. 16-21, 1995	Review program procedures and cargo handling \$1186.30
Ben Myatt	New Zealand Feb. 9-19, 1995	Obtain information on New Zealand's methods of packaging, handling, and inspecting dry milk powder for international shipment \$3537.62
James Firth	Port au Prince, Haiti Feb. 19-28, 1995	Review program procedures and cargo handling \$1636.45
Gene Belcher	Port au Prince, Haiti Feb. 19-26, 1995	Review program procedures and cargo handling \$1502.57
Ted MacLaughlin	Mexico City, Mexico May 7-13, 1995	Assess credit worthiness of foreign banks \$2042.28
Steven Searcy	Mozambique, South Africa Apr. 21-May 6, 1995	Assist DOJ in overseas investigation of CCC claims \$7819.50
Joan Califf	Mozambique, South Africa Apr. 21-May 8, 1995	Interview witnesses and conduct depositions for AFRAM \$7113.91
James Little	Mexico City, Mexico May 7-10, 1995	Assess credit worthiness of foreign banks \$1274.96
Sally Nunn	Paris, France May 29-Jun. 3, 1995	Paris Club meeting \$2015.82
Merle Brown	Rome, Italy Jun. 24-29, 1995	World Food Program Conference \$2068.72
Sally Nunn	Paris, France Jul. 16-21, 1995	Paris Club meeting \$2080.36

Wayne Bjorlie	Rio de Janeiro, Brazil Aug. 28-Sep. 1, 1995	Accompany FAS to meet with Brazilian officials about U.S. cotton program \$1461.70
Douglas Frye	Poland, Lithuania, Latvia, Estonia, Denmark Sep. 16-30, 1995	Analyze foreign banks for GSM program \$4953.20
Gene Belcher	London, England Sep. 14-21, 1995	Meetings/litigation on AFRAM \$2854.05

FUNDING FOR THE GENERAL SALES MANAGER

Question. What is the justification for the fiscal year 1997 budget proposal that the Office of the General Sales Manager be funded through a direct appropriation of funds rather than through funds transferred from the Commodity Credit Corporation?

Answer. Because of the salary and expense nature of the Office of the General Sales Manager, it is our view that it is more appropriate that funding of these types of expenses come from discretionary rather than mandatory spending accounts.

FEDERAL/STATE MARKET IMPROVEMENT PROGRAM (FSMIP)

Question. The budget again proposes a \$1.5 million increase in funding for the Federal/State Market Improvement Program.

What is the current level of funding for this program.

Answer. For fiscal year 1996, the Federal/State Market Improvement Program is funded at \$1.2 million. This funding is included in appropriations for the Agricultural Marketing Service. Our request for FAS funding for this activity is in addition to that made available to AMS and would be targeted exclusively at international marketing activities.

Question. Please provide a list of the projects, by state and amount, provided matching grants through this program in each of fiscal years 1994 through 1996.

Answer. We will provide that information for the record.

[The information follows]:

FEDERAL-STATE MARKET IMPROVEMENT PROGRAM

The following projects were awarded grants in Fiscal Year 1994.

<u>STATE</u>	<u>DESCRIPTION</u>	<u>\$AWARDED</u>
Arizona	Expand the base of grower participants to include New Mexico and Native Americans, and develop fresh herb and spice product standards.	\$45,000
Arkansas	Develop a marketing program for fresh and processed muscadine grapes including harvesting, handling, storage, and packaging.	50,000
California	Increase distributor participation, and develop qualitative information as part of the OMNIS report such as "Crop of the Month (Week)."	25,000
Colorado	Identify accurate predictors of total carcass yield of boneless lean tissue and develop prediction equations for maturity cows and their carcasses.	114,630
Connecticut	Establish a communication network among small and mid-size food businesses in the region, and conduct educational and informational seminars.	30,000
Florida	Delineate existing marketing channels for locally produced tropical fruit and estimate proportions of each type of fruit moving through each channel.	35,208
Hawaii	Determine the current and potential supply of tropical and specialty fruit, and marketing channels for distribution.	45,000
Maryland	Develop a hands-on training program for growers to establish consistent packing and grading, and combine shipments.	61,797
Massachusetts	Develop a resource manual containing information to assist the producers with business planning, marketing, trademark, and registration procedures, and involvement with trade shows.	40,680
Michigan	Prepare guacamole from fresh and frozen spears, cuts, and tips to assess the efficacy of using various forms of asparagus, and test the need for stabilizers to prevent weeping.	50,000

Missouri	Demonstrate that electronic implants can be an integral part of a total beef cattle record keeping system.	30,020
Nebraska	Develop an aquaculture board to research, and develop an aquaculture plan to assist the industry.	16,140
New Jersey	Update the database, which the Department is now capable of keeping it on computer for the first time, and phone contacts and print and distribute the directory.	4,000
New Jersey	Update the agricultural export directory and put all and put all of the firms on the computer database that will make it easier to make future revisions.	8,000
New Jersey	Provide an accurate statistical quantification of food and agricultural exports, identify trends, strengths and weaknesses in the agricultural export development program.	10,000
New Mexico	Develop production and processing capabilities for choke cherries and wild plums that are indigenous to the region.	75,000
New Mexico	Conduct production research on herbs locations species with market potential at three locations in the State.	43,593
New York	Conduct an in-depth market study of the New York metro area for meat goat.	28,942
Ohio	Conduct an assessment, education, and experimentation in order to gain sufficient understanding needed to design and implement a network marketing system for specialty food firms operating in the region.	60,000
Oregon	Contract with in-country market researchers in Latin America and Southeast Asia to identify current and potential users of hazelnuts.	60,000
Puerto Rico	Provide daily price information from the 7 major markets, monthly agricultural production estimates, imports and exports of agricultural products, and prices for agricultural inputs from the Puerto Rico Department of Agriculture to the Extension Service.	35,000

South Carolina	Determine wholesalers, retailers, and restaurant interest, complaints, or problems with hybrid striped bass, criteria for acceptance, and current experience with the cultured product.	40,000
Tennessee	Develop an econometric model that will allow empirical tests of causality to be conducted and facilitate evaluation of exogenous impacts such as weather.	45,000
Texas	Conduct market and informational surveys with consumers and producers for IPM produced agricultural commodities.	35,000
Texas	Continue to expand the producer panel to include 6 dairy farms representing other production regions of Mexico, and analyze alternative policy scenarios.	40,000
Texas	Identify current market channels for meat goats and opinions and attitudes among wholesalers, retailers, and restaurants toward goat meat.	109,000
Texas	Use the framework established to create a working prototype computer-aided decision making system for organic horticultural materials.	40,000
Virginia	Review the existing literature on benefits and costs of public involvement in the providing of market, price, and related economic planning activity.	47,190
Virginia	Determine the correlations between visual appraisal, empirical body measurements and carcass characteristics of slaughter goats.	31,700
Wisconsin	Establish a series of mentor relationship meetings between interested and established CSA farms for information exchange.	19,100
Wisconsin	Identify the size and scope of the aquaculture industry, and develop a Statewide aquaculture directory.	25,000
TOTAL		<hr/> \$1,300,000

FEDERAL-STATE MARKET IMPROVEMENT PROGRAM

The following projects were awarded grants in Fiscal Year 1995.

STATE	DESCRIPTION	\$AWARDED
Arizona	Develop an agricultural export directory and a farm Direct to You Directory, and develop them in a format that will make them self-sustaining after initial development.	\$30,000
Arkansas	Develop and arrange a workshop consisting of representatives of school lunch procurement officials and limited resource farmers from five Southeastern States to discuss the issues and identify possible opportunities.	12,966
Colorado	Bring USDA software relating to export trade leads and suppliers to State offices and cooperators so that States can develop their trade directories in a compatible format and transmit information on disks or through a nationwide "E-Mail" system.	96,000
Connecticut	Determine through a feasibility study the economics of establishing a specialized shared food processing facility in Connecticut, New Hampshire, or Rhode Island.	30,000
Idaho	Undertake a fact finding tour to Mexico to meet with managers of the leading millers and brewers in Northern Mexico, and determine the preferred wheat and barley types for various end products.	40,000
Iowa	Identify producers and handlers of organic products; increase market potential; identify the potential for specialty crops; and identify needs of the organic industry.	8,936
Louisiana	Determine current organization and structure of the ratite industry and identify saleable products, yields, potential markets and price levels.	62,305
Louisiana	Develop and verify a set of product specifications for goat meat, and compare carcass characteristics of both sexes over two weight categories at three levels of body conformation.	50,000
Maryland	Assist existing and potential produce farmers to identify particular ethnic and specialty fruits and vegetables that can be grown in the region and have significant market opportunities.	34,219

Maryland	Determine the feasibility of organic farmers forming a marketing cooperative by determining the volume and variety of organic produce produced.	49,812
Massachusetts	Produce county agricultural tourism brochures; focus on marketing various commodities through a video; and research and develop a pilot plan for an implementation of a 1-800 number.	20,000
Massachusetts	Evaluate the potential for Island farmers on Martha's vineyard to meet the local, seasonal demands for agricultural products and determine the feasibility of off-Island sales.	8,000
Massachusetts	Increase demand for local produce as a means of improving the State's agricultural economy and making the preservation of open space profitable.	6,000
Massachusetts	Produce a directory of sheep producers and meat/wool products as well as sheep related products and services which can be used by both producers and consumers.	3,000
Missouri	Develop a means of collection and dissemination of current prices received by large, medium, and small swine producers.	30,000
Nebraska	Develop, through research, a model to improve the competitive position of Nebraska ranchers and feeders regardless of size, and production capabilities.	55,000
New Jersey	Evaluate the attitudes and preferences of farmers, wholesalers and retailers, and consumers towards the Jersey Fresh logo and examine the factors affecting the low participation rate in the Jersey Fresh Quality Grading Program.	45,000
New Mexico	Continue development of production schedules and cultural requirements for a select group of medicinal herbs.	52,997
New Mexico	Help the Taos Pueblo reintroduce agriculture through a pilot program raising choke cherries and wild plums with a goal to develop the production, packaging, pricing, storage and processing methods for these crops.	71,500
New York	Use existing databases on agribusinesses to construct a mailing list that would be used for distribution of a survey designed to obtain relevant marketing data for the products produced and/or sold by agribusinesses surveyed.	25,000

North Carolina	Identify the key factors to explain the continuing decline of peanut butter and peanut product consumption; factors that influence consumption of other snack foods; perceptions relating to the health and nutritional aspects of peanuts; and examine the methods used by other snack food manufacturers.	\$30,000
Ohio	Conduct a regional assessment of producers, other food-related firms, and other components of the regional food delivery system in order to identify capacities, potentials and barriers to the development of the specialty foods industry.	60,000
Oklahoma	Evaluate various flavoring and processing techniques necessary to return a full flavor to reduced oil pecans.	60,000
Oklahoma	Determine domestic and international market potential by hay package type and destination.	50,200
Oregon	Identify and establish highest current and future potential export markets for specific fresh fruits and vegetables.	28,693
Puerto Rico	Carry out a study of the literature concerning the experience with marketing orders in the Federal and State systems and evaluate the receptivity of producers and handlers to a marketing order system.	32,000
South Dakota	Identify major production and yield trends for by region in South Dakota, with volume handled by elevators.	28,500
Texas	Determine the meat quality and acceptability of frozen versus fresh goat meat.	84,872
Vermont	Develop a plan for marketing dairy products from the Northeast region in the most promising foreign markets (includes assessment of products for sale, analysis of country candidates and trade barriers in target markets.)	50,000
Washington	Assist the specialty foods/value-added processing and farming industries to better communicate, network, and target new avenues for marketing their goods.	45,000
TOTAL		<hr/> \$1,200,000

FEDERAL-STATE MARKET IMPROVEMENT PROGRAM

The following projects have been awarded grants in April 1996.

<u>STATE</u>	<u>DESCRIPTION</u>	<u>\$AWARDED</u>
Idaho	Develop a consumer-based understanding of the National aquacultural and, specifically, trout markets in order to assist the Idaho and U.S. trout industries in developing appropriate educational and marketing strategies.	\$48,000
Illinois	Increase the value of U.S. soybeans by better serving the firms producing high-valued soyfood products such as tofu and miso.	98,000
Massachusetts	Expand the database of producers interested in exporting high-valued food and agricultural products, measure the quantities of products presently exported, and develop a multilingual directory as a marketing tool to link producers with foreign buyers.	26,270
Michigan	Conduct processing quality assessments for new apple cultivars or promising advanced lines, using controlled processing conditions.	57,650
Minnesota	Identify marketing opportunities and strategies for small scale producers and processors by increasing the scale of direct marketing of meat, fish, and fowl and by developing niche retail and food service markets for value-added products.	45,000
Nebraska	Investigate the feasibility of producing and marketing turf and forage grass seed as a specialty crop in irrigated areas of western Nebraska.	70,000
North Carolina	Provide additional information concerning consumer purchasing decisions to assist North Carolina and Southeast regional producers and marketers of nursery products to better market their products and services.	50,000
Oklahoma	Identify various factors that foreign importers and distributors in the food service industry consider in deciding which products to purchase and to discover what specialty food products are in demand.	38,000

South Carolina	Prepare a market analysis, develop alternative production practices, determine structural and financial requirements for establishing a farmer marketing cooperative, and develop quality standards for domestically produced flax.	71,500
Texas	Refine the evaluation of fat deposits among different breeds of cattle and develop a training video which will enable graders of live cattle to be more accurate in applying grade standards.	90,000

10 proposals approved, 10 States = \$594,420

40 proposals considered, 20 States = \$1,712,881

Question. Why were none of the increased funds made available to the FAS for fiscal year 1996 allocated for this requested program increase?

Answer. Approximately \$5 million of the increased funds requested for FAS for fiscal year 1996 was not appropriated. Unfortunately, FSMIP, as well as several other export expansion activities could not be funded in fiscal year 1996.

QUESTIONS SUBMITTED BY SENATOR GORTON

1996 MARKET ACCESS PROGRAM ALLOCATIONS

Question. This Subcommittee was one of the first Subcommittees to pass its fiscal year 1996 Appropriations bill. It has recently come to my attention that the fiscal year 1996 monies for the Market Access Program, formerly the Market Promotion Program, have not yet been allocated to the cost share recipients? Is this true, and if so, why? Is this normal for fiscal year 1996 monies to be allocated six months into the fiscal year? When do you expect the fiscal year 1996 monies to be allocated to reimburse the promotional activities of the cooperatives, trade associations, nonprofits, and small business that have invested their share of these cost-shared dollars?

If possible, please provide me a list of organizations in Washington state that participate in the Market Access Program.

Answer. The fiscal year 1996 monies for the Market Access Program (MAP) have not been allocated as of April 23, 1996. However, we expect the allocations to be announced during the first week of May. In general, allocations are not announced until several months into the fiscal year. There are two primary reasons for this. First, we do not allocate funds until we have a final funding level from Congress. Secondly, the time needed to review, evaluate and develop recommendations for all MAP applications takes approximately 12 weeks to complete and this can only be done after the end of the application period, which this year was in January.

Organizations in Washington state that participated in the 1995 Market Access Program include:

Western U.S. Agricultural Trade Assoc.
 U.S. Surimi Commission
 Asparagus USA
 Hop Growers of America
 Northwest Wine Promotion Coalition
 OR-WA-CA Pear Bureau
 USA Fresh Sweet Cherry Promotion
 Washington State Apple Commission
 American Legend Cooperative
 Ames International, Inc.
 Arbor Crest Wine Cellars
 Brown & Haley
 Canandaigua Wine Company, Inc.
 Chief Wenatchee
 Chukar Cherries
 Excel Trade Limited
 Hedges Cellars
 Homeland Fruit Company
 Hoodspout Winery
 International Market Brands
 Lamb Weston, Inc.
 Liberty Orchards
 Matthews Candy Co.
 Nalley's Fine Foods
 National Foods
 Northwest Packing Company
 Pasta USA, Inc.
 Phoenix Marketing, Inc.
 Roman Meal Company
 Stimson Lane Vineyards & Estates, Ltd.
 Sun Ridge Foods, Inc.
 Tree Top Inc.
 Washington Beef, Inc.
 Worden Washington Winery

U.S. AGRICULTURAL EXPORTS TO CHINA

Question. Mr. Schumacher, there has been much discussion raised in regard to *Most Favored Nation* status with China. It is important for me to know specifically how many billions of dollars of agricultural products the U.S. has exported to China each year since 1990. Is it true that the U.S. has exported about \$2.2 billion worth of agricultural products to China in fiscal 1995? What are your projections for fiscal 1996? Please provide me, if possible, data showing what commodities were exported and how much? I would also be very interested in knowing Washington State's exports to China -- what commodities and how much was exported to China from fiscal 1990 to present.

Answer. China is an important overseas market for U.S. agricultural products, and its importance is growing. In fiscal 1995, U.S. agricultural exports to China reached a record \$2.4 billion making it our 7th largest overseas market. The Department's current forecast for fiscal 1996 is \$2.9 billion. This increase is

mainly based on the expectation of continued strong sales for selected bulk commodities like coarse grains (mainly corn), cotton, and soybeans. Please keep in mind that these figures represent *direct* U.S. sales to China, and as such do not reflect the transshipment of product moving into southern China via Hong Kong. The Department estimates that China is the final destination for one-fourth to one-third of U.S. agricultural products shipped to Hong Kong. U.S. sales to Hong Kong reached a record \$1.4 billion in fiscal 1995.

The volatility in U.S. agricultural exports to China over the past several years was largely due to changes in the volume and unit prices of a few bulk commodities, namely wheat, coarse grains, and cotton. In descending order of importance, the major U.S. agricultural products exported to China in fiscal 1995 were cotton, wheat, coarse grains, soybean oil, and hides and skins. Together, they accounted for over 90 percent of total U.S. sales to China.

Lastly, I would like to turn to your question regarding the type and amount of Washington State's agricultural products shipped to China. Unfortunately, due to the method by which trade statistics are collected, we do not have an estimate on the types and amounts of Washington State exports to a specific country. Although the Department has access to the value and volume of products passing through all U.S. customs districts--one of which is Seattle, Washington--this information cannot be directly associated to an individual state. The central problem is that many products are transshipped via one or more states before leaving the country, and that the ownership of consignments can also change hands. The Department's Economic Research Service (ERS) annually estimates the type and value of U.S. agricultural exports by state. But, due to lack of necessary resources, these data are based on average state production figures and industry surveys and are not broken down by country of final destination. According to ERS, the total value of Washington State's agricultural exports to the world was \$1.6 billion in fiscal 1994, with wheat and vegetables accounting for nearly half of the total value.

IMPACT OF ELIGIBILITY CRITERIA CHANGES IN 1996 APPROPRIATIONS BILL

Question. Since the fiscal year 1996 Agricultural Appropriations Act changed the eligibility criteria for the MPP, now MAP, were any groups excluded from participation? Was there any delay in implementing the fiscal year 1996 program? What does this mean for exports? Did we see a decline in exports because of the eligibility change?

Answer. As a result of the fiscal year 1996 Appropriations Act, large brand companies are now excluded from direct participation in the MAP under the Export Incentive Program. These large companies --as defined under SBA regulations --must now apply for MAP funding through nonprofit trade associations or State/regional trade groups. In addition, the U.S. Mink Export Development Council is precluded from participating in the MAP. Other groups were not affected by the legislation, and may apply to the MAP as they have in previous years. The announcement date for the 1996 MAP is expected to occur in early May 1996. It is not possible to evaluate the impact of the changes at this time since they will be implemented with the 1996 MAP.

Question. Under this request, outlays for salaries and expenses would increase to \$133 million, a \$9 million increase over fiscal year 1996. You have

stated that this increase will be used mainly for "green-box" programs, such as the Foreign Market Development Cooperator Program. I worked with my colleague Senator Burns to see that a provision was included in the Farm Bill that would provide for the first-time specific authorization for this program. I am interested in knowing how this \$9 million in salaries and expenses will be used to support the FMD program.

Answer. The fiscal year 1997 FAS budget request include \$26 million for the Foreign Market Development Program, an increase of \$4 million from the fiscal year 1996 level. With this increase, and utilizing remaining carry over balances, we will be able to continue Cooperator Program activities at prior year levels in fiscal year 1997. The remainder of the increase requested for FAS will be used primarily to expand other "greenbox" activities such as the Distributor Development Program and the Federal-State Market Improvement Program.

COMPETITION IN THE FOREIGN MARKET DEVELOPMENT PROGRAM

Question. In your statement you speak to "competitive basis" for awarding cooperator cost-share assistance in the Foreign Market Development Cooperator Program --How were awards made previous to fiscal year 1997? Why is this new?

Answer. We currently have set budgets for the nonprofit commodity trade organizations that receive assistance under the Foreign Market Development (FMD) program. The FMD was established to promote basic program crops over the long-term through such activities as trade and technical servicing. Because funding has been sufficient to meet all requests for financial assistance in the past, a competitive process was not necessary. In addition, it was considered difficult to evaluate the relative net benefits of different plans. However, FAS sees merit in adding a competitive process to the FMD and is currently considering several options for implementation.

BUDGET FOR INTERNATIONAL PROGRAMS

Question. In presenting the President's budget for fiscal year 1997, you said that the Department would be "continuing the Administration's strong commitment to export promotion by providing just under \$8 billion in program level for the international programs and activities in 1997." How does this \$8 billion break out by program?

Answer. We will be pleased to provide that information for the record.
[The information follows]:

International Programs and Activities Program Level (Dollars in Millions)

Program	FY 1997 Budget
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CCC Export Credit

Short-term Guarantees (GSM-102)	\$5,000
(Supplier Credit Guarantees)	(250)
(Facilities Financing Guarantees)	(100)

Intermediate-term Guarantees (GSM-103)	<u>500</u>
Total, CCC Export Credit	5,500
Market Promotion Program	110
Export Enhancement Program	861
Dairy Export Incentive Program	67
Sunflower and Cottonseed Oil Assistance Programs	20
P.L. 480 Food Assistance	1,110
Food for Progress Program	115
FAS Salaries and Expenses	<u>180</u>
Total, International Programs	\$7,963

EXPANSION IN OVERSEAS OFFICE STRUCTURE

Question. Further, you have requested an increase for an expansion in the agency's overseas office structure and its market development activities. Will the agricultural community have the opportunity to provide suggestions and comments on how you propose to expand these overseas activities?

Answer. FAS maintains an active dialogue with a large and expanding number of cooperator and other agribusiness trade organizations about market development goals and preferred markets. Because FAS is practically unique in its mission of promoting all U.S. food and agricultural product exports, it will not necessarily always agree with individual organizations dedicated to sales of products in a given sector about which are the highest priority markets. However, in general terms, FAS is confident that it is focusing the expansion of its activities on markets like China, Russia, Korea, and Mexico which are also of great interest to a wide range of U.S. private trading entities.

PRIVATE SECTOR INFORMATION SOURCES

Question. In maintaining a worldwide agricultural market intelligence and commodity reporting service, to what extent do you use U.S. private sector sources located in the 132 countries covered by the FAS?

Answer. FAS makes use of all available information sources, both public and private, to carry out its commodity reporting responsibilities. U.S. private sector sources tend to be concentrated in larger countries with which the United States has the most developed trading relationships. In perhaps half of the countries where FAS gathers information, the U.S. and third-country trading presence is quite limited. This situation requires FAS attaches and foreign national employees to rely more heavily on local government and local trade sector contacts in preparing scheduled reports and investigating barriers to U.S. food and agricultural trade.

IMPACT OF U.S. AGRICULTURAL EXPORTS ON FARM INCOME

Question. A USDA priority is enhancing the economic development of rural America by increasing agricultural exports and bolstering farm income. Does the Department have any analysis that demonstrates the linkage between exports and

farm income on a bulk, intermediate, and high-value basis? In other words, what exports yield the highest returns to farmers and rural communities?

Answer. Yes, the Department tracks the impact agricultural exports has on jobs and income. USDA's Economic Research Service regularly updates its input/output model of the U.S. economy that measures the economic activity triggered by agricultural trade. This model not only provides estimates on the impacts from total agricultural exports, it also separately calculates the impacts generated from bulk commodity and high-value product exports.

We know from this model that the farm share of total income from exports is higher for bulk commodities than for high-value products. The most recent figures indicate that farmers capture 42 percent of the total income generated by bulk exports, whereas this figure falls to 25 percent for high-value products. For all agricultural exports, the farmers' share of income from exports is 31 percent. High-value products differ from bulk commodities in that they are generally further processed or handled and stored in ways that add cost to the final sales price. When this happens the non-farm share of the final sales price is higher.

Having said this however, I would like to make clear that most of the additional income from exports that has flowed into the pockets of farmers around the country over the past ten years--say from the mid-1980s to 1994--has not come from bulk exports. Instead, most of the additional income generated from exports has come through high-value products as their total sales value rose from \$11.9 billion in 1986 to \$25.5 billion in 1994. During the same period, bulk sales rose from \$14.5 billion to \$18.0 billion. In 1995 and 1996, the focus has returned to the commodity markets as U.S. bulk exports surge. The main point is that while the farm share of a particular product category is important, it is equally important to understand which category has grown the fastest and which has the greatest potential for further growth in the near future.

There is one other point I would like to address in responding to your question about the impact of U.S. agricultural exports on the economic well being of rural America--a point that goes beyond the question of farm income to the wider question of income generation in all the associated industries that are tied to the agricultural sector, in both rural and urban areas all across this country. Our input/output model estimates the additional income generated by rising agricultural exports. U.S. agricultural exports totaled \$54.1 billion in fiscal year 1995, which in turn generated an additional \$74 billion in supporting activities, such as food processing, manufacturing, transportation, and other servicing like banking. Much of these supporting activities took place in rural areas, employing people in towns all across America. If we break out this figure into its bulk and high-value portions, we know that the additional supporting activities generated by bulk exports reached a value of \$24 billion in fiscal year 1996, while the figure for high-value products was \$50 billion.

DISTRIBUTOR DEVELOPMENT PROGRAM

Question. What is the "Distributor Development Program" and is the development of marketing strategies for specific groups of agricultural products the appropriate expenditure of government funds and resources?

Answer. The Distributor Development Program's (DDP) objective is to firmly establish distribution for U.S. foods in key emerging markets by using market research, buying missions and U.S. trade association promotions as part of a

three year integrated strategy. The DDP focuses on strategies pertaining to in-country distributor development, not on market development, and is designed to get importers and exporters to work together to develop an effective in-country distribution system for U.S. food products. The use of government resources to develop marketing strategies for specific groups of agricultural products is an appropriate investment to combat efforts of our competition by developing effective distribution for U.S. foods in markets with keen export potential. The DDP addresses the lingering problem that in key emerging markets, effective distribution of U.S. food products is constrained by such factors as poorly developed marketing systems for food products, and a lack of information on how to buy and market U.S. products. Under this program, distribution for U.S. foods would be firmly established by using market research, buying missions and U.S. trade association promotions as part of a three year integrated strategy.

Question. What types of agricultural products do you intend to promote under this program? Isn't this function best done through the States and private companies?

Answer. We feel groups of products like fresh produce and seafood have particularly high potential in key markets and would focus our efforts on them. For example, a strategy might be developed for fresh produce in Brazil and Argentina, or for food ingredients in Indonesia, Thailand and Malaysia. To avoid duplication with existing market development programs by industry organizations and regional State trading groups, the program would focus on a product grouping which is currently handled by more than one Market Access Program participant.

INCREASES DUE TO THE FARM BILL

Question. What specific areas within your budget have you asked for an increase -- due to the recently signed Farm Bill?

Answer. The President's budget was submitted to Congress prior to enactment of the FAIR Act. None of the increases proposed in our fiscal year 1997 budget are specifically associated with the FAIR Act, and at this point, we do not anticipate the need for any amendments to our request for international programs as a result of the FAIR Act.

FOREIGN MARKET DEVELOPMENT CARRY BALANCES

Question. Will you explain "carry-over balances" and what this means in regards to Mr. Schumacher's testimony on page 9. As you know, the Foreign Market Development Program has been specifically authorized in the 1996 Farm Bill. Are carryover balances necessary now that this program is authorized? Please elaborate.

Answer. The term "carry-over balances" refers to the Department's policy of maintaining "forward funding" for the cooperator program. To provide continuity to the FAS foreign market development cooperator export program and, at the same time, to provide an uninterrupted source of funding, the Agency received special authority from OMB to establish a "forward funding" account for the cooperator foreign market development program. This authorized the Agency to obligate and expend project funds beyond the standard 12-month Government fiscal year. The cooperator project agreement is the method by which funds are allocated to

individual cooperators usually on an annual basis, after receipt of the Agency's yearly appropriation. These funds are available for obligation to the cooperator for 3 years subject to FAS approval of the cooperator's annual marketing plan and budget. Those funds which are not used the first year of the agreement carry over to the next year and collectively comprise the program's "carry-over balances." The rationale for forward funding is based on recognizing that successful foreign market development efforts for U.S. agricultural exports can only be accomplished through a long term commitment to the export endeavor backed by sustained and sufficient financial and human resources.

The provisions of the FAIR Act authorizing the Cooperator Program do not lessen the rationale or need for carry-over balances.

QUESTIONS SUBMITTED BY SENATOR MC CONNELL

INTERNATIONAL TRADE

Question. During the past several months the benefits of NAFTA and the UR have been challenged. Has the Department done a review or assessment to date on the benefits of such international agreements on agricultural related jobs, exports, farm income, reductions in trade barriers, and overall access to foreign markets?

Answer: The Economic Research Service of USDA prepares a periodic monitoring report on the NAITA that assesses trade, employment, environmental issues, and other topics related to the implementation of the NAFTA. The fifth issue will be published this week, and we will make sure a copy is made available.

The NAITA has been in effect for just over two years. The agreement was designed with a lengthy transition period so that tariffs and nontariff barriers on U.S.-Mexican trade would be phased out slowly over time. Thus, it is not easy to precisely measure the trade impacts from year-to-year. Following the completion of negotiations in 1993, USDA estimated that U.S. agricultural exports would be \$2.6 billion higher and farm income would be 2-3 percent higher at the end of the transition period than without the NAFTA, creating about 56,000 new jobs.

U.S. agricultural exports to Canada were \$5.2 billion in fiscal year 1994 and climbed to \$5.8 billion in fiscal 1995. For Mexico, U.S. agricultural exports were \$4.1 billion in fiscal 1994 and \$3.7 billion in fiscal 1995.

While it is difficult to do an empirical analysis of the effects of the Uruguay Round at this early stage, USDA did estimate the potential benefits of the agreement in a study published in 1994. This study projected that U.S. agricultural exports would rise by as much as \$5 billion by the year 2000 as a result of the Uruguay Round, creating over 100,000 new jobs and increasing farm income by over \$1 billion. These benefits are expected to result from reductions in import barriers and export subsidies by our trading partners and the economic growth that will be generated thereby. During 1995 all of the major trading countries faithfully began to implement their reduction commitments. USDA is carefully monitoring this implementation process to help ensure that the projected benefits of the agreement become a reality.

CATTLE PRICES

Question. Kentucky is a large cow/calf state, many of my cattle producers are blaming low prices on NAFTA, in particular the large number of imported cattle coming in from Mexico. Have imports increased and what impact has this had on cattle prices and producer income?

Answer. Kentucky is among the top twenty producers of cattle and calves in the United States. In 1995, 1.5 million head of cattle and calves were marketed in Kentucky, about 1.5 percent higher than in 1994. Cash receipts from 1995 cattle and calf marketings totaled almost \$548 million, down from \$648 million in 1994. Many calves in Kentucky are shipped to other states for feeding and eventual slaughter. A portion of the meat from these animals has likely entered the export market.

As a result of NAFTA, U.S. beef exports to Mexico in 1994 almost doubled from 1993 to reach a record \$233 million. With the December 1994 peso devaluation and the Mexican economic slowdown that followed, 1995 exports dropped to \$86.0 million. Despite reduced short-term export prospects to Mexico, the medium- and long-term outlook for U.S. beef remains positive. In the next 2-5 years, Mexico's burgeoning population and likely declining domestic beef production will present substantial opportunities for U.S. exports. Early signs of rising Mexican beef import demand are already evident. From January to February 1996, U.S. beef exports totaled \$5.4 million, up from the \$2.5 million recorded in the same period in 1995.

Cattle imports from Mexico increased sharply in 1995, adding to already large domestic cattle supplies and downward price pressures for beef. A large number of the estimated 1.7 million head of Mexican cattle imported entered cattle markets in the Southern Plains. Cattle imports from Mexico in 1996 are down substantially from 1995 levels. Imports in the first two months of 1996 totaled about 100,000 head, compared with nearly 336,000 head in the same period a year ago.

TOBACCO IMPORTS

Question. Since the passage of the NAFTA what has been the import level of tobacco, and how does this compare to pre-NAFTA?

Answer. U.S. unmanufactured tobacco imports from both Mexico and Canada have remained relatively unaffected by the lower U.S. import duties as negotiated in NAFTA. U.S. imports from Canada (mainly flue-cured tobaccos) increased slightly in the years immediately following the implementation of the U.S./Canadian Free Trade Agreement in 1989 but have declined since then to 4,047 metric tons valued at \$10.2 million in 1995. U.S. unmanufactured tobacco imports from Mexico, which are primarily burley tobaccos, declined considerably following the implementation of the NAFTA agreement in 1994. For 1995, U.S. unmanufactured imports from Mexico totaled 887 metric tons, valued at \$3.6 million.

Canada and Mexico historically have not been significant U.S. unmanufactured tobacco export markets, and U.S. leaf exports to these markets remained relatively unchanged following the implementation of the free trade accords. However, cigarette exports to Mexico climbed quite significantly following the implementation of NAFTA in 1994 to 2.9 million pieces, valued at

\$39.6 million. For 1995, cigarette exports fell back to 1.3 million pieces, valued at \$22.7 million, but were still higher than pre-NAFTA levels.

WTO CONSULTATIONS ON EU HORMONE BAN

Question. Please update the Committee on the on-going negotiations with the EU on hormones.

Answer. On March 27, the United States held Article XXII consultations with the EU in Geneva. Three other countries (Canada, Australia, and New Zealand) participated in these consultations in support of the U.S. position on the need for health measures to be based on sound science. Unfortunately, these consultations were not very productive, and the EU failed to provide written answers to our questions by our April 12 deadline. Therefore, the United States has notified the WTO that we will request a panel at the May 8 meeting of the Dispute Settlement Body. The EU is expected to block this request, which they are allowed to do once. We will then make a second request. A panel should be formed by July and a panel report could be completed in early 1997. As this process unfolds, however, we will remain open to any opportunities to find a bilateral solution which will re-open the EU market for U.S. beef.

POULTRY EXPORTS TO RUSSIA

Question. Please update the Committee on the on-again off-again exports of poultry products to Russia?

Answer. On March 25, the USDA and US Trade Representative signed an agreement with Russia resolving the poultry issue. As a result, the United States is again exporting poultry to Russia, and Russia is issuing new import licenses. In the agreement, Russia formally recognized that the U.S. inspection system and the American poultry itself are fully acceptable for the Russian market. The agreement clarifies U.S. compliance with Russian requirements. It also puts in place bilateral practices for U.S. plant approval--for example, spot-checks of U.S. poultry plants and a notification system to review issues and concerns--that will help ensure that similar problems do not arise in the future.

FSIS and the Russian Veterinary Department have negotiated and agreed to criteria which will be the basis for all future poultry plant reviews/approvals. The agreement, new criteria and revised export certificate have been made available to the industry.

With regard to the tariff increases, USDA and USTR met with Russian officials on March 28-29. The Russian representatives agreed to present to their government the U.S. proposals that: 1) Russia apply specific tariff rates on various poultry products at levels no higher than 30 percent ad valorem, and 2) Russia ensure that poultry products imported from the U.S. not be subjected to any minimum reference price. We are continuing to press Russia for an official response to our proposal. Trade sources report that currently an import duty of 30 percent is being applied to the actual CIF price.

On April 16, 1996, President Yeltsin announced a decree calling for the government to investigate possible methods, including tariffs and/or import quotas, to protect domestic production of commodities that have been injured by imports. Although no official documents have been made available, rumors indicate that Russia could be considering an import quota for poultry. Whether or not any

restrictive import measures such as quotas become fact, and which products are affected, may well depend upon the outcome of the Russian elections.

EFFECTIVENESS OF MARKET PROMOTION PROGRAM

Question. How effective has the MPP program been in moving U.S. agricultural products into foreign markets? Where do you think our overall trade exports would be if we didn't have MPP? What role has MPP had in gaining access to foreign markets for high-value products? How has MPP helped in generating additional jobs in the U.S.?

Answer. FAS released a economic study last year that sheds light on the effectiveness of the MPP program and its predecessor, the Targeted Export Assistance (TEA) program. This study separated out the trade effects of the MPP from other factors that boost exports, such as the value of the dollar, trade liberalization, rising incomes, and population growth. While the study focused only on high-value products, these products do account for 75 percent of the overall program which gives us a pretty good idea of how well the program is working.

In 1995, after 10 years of investment in the global competitiveness of U.S. agriculture, assuming full additionally, MPP had helped increase the U.S. share of world high-value trade by over 4 percentage points and increase U.S. exports by \$4.6 billion and supporting economic activity by another \$7.5 billion. In addition, MPP boosted U.S. farm income by \$860 million in 1995 and supported 66,000 U.S. jobs both on and off the farm. If we had not made this investment over the past 10 years, and continuing to assume full additionally, U.S. agricultural exports would have only been \$51.2 billion in 1995 instead of the \$54.1 billion that was actually reported.

Another encouraging aspect of the report confirms what USDA has long maintained --that the *long term impact* of market development programs like MPP is substantially greater than the short term impact. As gratifying as the above trade and economic impacts are, the study concludes that they will continue expanding over time, assuming the program continues at current funding levels. In fact, in year 2000, MAP (MPP's successor) will increase U.S. agricultural exports by \$5.6 billion, farm income by \$1.1 billion, and support 124,000 jobs. Had TEA, MPP, and MAP never existed, neither would these benefits.

BARRIERS TO PARTICIPATION IN HORSE RACES

Question. In 1992, I asked GAO to describe the barriers that limit participation by U.S. thoroughbred racehorses in certain countries' horse races. I am particularly interested in Japan and Hong Kong. Japan has had the most stringent barriers. Could you please provide me an update on the status and progress made in this area and if this issue is raised in agricultural negotiation between these countries?

Answer. At the request of Japan's Racing Association, in 1994, Japan established stricter requirements on thoroughbred racehorses. Despite these new regulations Japan remained one of our largest importers of both breeding and feeding horses. Sales of horses to Japan have been steadily increasing since 1993 and were valued at over \$87.5 million in 1995. According to contacts at the American Quarter-Horse Association and APHIS Veterinary Services National Center for Imports/Exports, neither Japan nor Hong Kong have imposed barriers on U.S. special event horses or permanent horses.

QUESTIONS SUBMITTED BY SENATOR BURNS

FOREIGN MARKET DEVELOPMENT ACTIVITY

Question. With respect to fiscal year 1997, the President's budget recommends an increase in the overall "foreign market development" account of about \$10 million (from \$48.4 million to \$58.3 million). If the Cooperator Program is recommended to be funded at \$26 million, what programs and in what amounts, make up the remaining difference?

Answer. The programs making up the remainder of the requested increase include: post expansion of \$2.7 million, Federal/State Market Improvement Program of \$1.5 million, Distributor Development Program of \$1.5 million, pay costs \$0.4 million, and a reduction for administrative savings of \$0.1 million.

FAS FUNDING PRIORITIES

Question. Who decides and how are the priorities established among these elements within FAS?

Answer. The components of the Foreign Market Development budget activity as well as for FAS as a whole are considered on an individual activity basis by the Department and OMB. Component funding priorities are established after consideration of their linkage with the Department's Long-Term Agricultural Trade Strategy, export expansion potential and past Congressional directives.

Question. How are dollars shifted among these items and how are they reconciled with the "foreign market development" fund? For example, funding for trade show increases nearly 30 percent in the years between fiscal year 1994 and fiscal year 1996. Correspondingly, the Cooperator program was cut by \$9 million or approximately 33 percent during the same period. How was this decision reached?

Answer. Funding for the components of the Foreign Market Development budget activity follows the proposals set forth in the President's budget, modified as required by Congressional action. An increase in funding for FAS trade show activities was proposed and subsequently funded in fiscal year 1996. Congressional action reduced funding for the Cooperator Program in fiscal year 1995, although a modest increase was provided in fiscal year 1996 for this program.

COOPERATOR PROGRAM FORWARD FUNDING

Question. In fiscal year 1993, we directed FAS to draw down its forward funding account. Can you explain how this was done? In other words, the forward funding account has dropped from \$18.4 million in fiscal year 1989 to an estimated \$2 million in fiscal year 1996 and 0 in fiscal year 1997, where has the money gone?

Answer. At the direction of Congress, forward funding balances have been used to offset the reduction of \$10 million in appropriated funding for the Cooperator Program approved by Congress in fiscal year 1995. Using these balances, we have been able to continue this program at the activity levels directed by the Committee. Unfortunately, as you have pointed out, these balances will be depleted by the end of fiscal year 1997.

Question. What is the minimum number of forward funding months?

Answer. We believe 3 months to be the minimum level of forward funding.

Question. What does this reflect?

Answer. Historically, the availability of forward funding has ensured funding continuity for Cooperators and insulates them from the funding uncertainties frequently encountered at the beginning of a new fiscal year. Forward funding sufficient to support Cooperator activities through the first quarter of a given fiscal year is considered the minimum desirable level.

Question. Has FAS' assessment of months changed and if so, for what reason?

Answer. In addition to providing a smooth transition from previous years, the availability of forward funding has provided flexibly to meet changing market opportunities and export expansion priorities. While this flexibility is clearly important, being able to transition from fiscal year to fiscal year without disruption is of greater priority. In this regard, we believe that three months of forward funding is desirable.

AGRIBUSINESS ADVISOR IN SOUTH AFRICA

Question. It has come to my attention that FAS has posted an "Agribusiness Advisor" in Cape Town, South Africa. What is this position? How are these individuals chosen? Is this an appropriate role for the Federal government?

Answer. The position of the Agribusiness Advisor in Cape Town, South Africa was established on the basis of recommendations made by a private sector assessment team that was in South Africa in October 1994. The position is not permanent. A one year appointment has been made with a possible one year extension. The Agribusiness Advisor complements the trade and representational function of the USDA Foreign Affairs Officer's position in South Africa. The Advisor's primary responsibility is to serve as an intermediary to the private sector and to facilitate and assist in the development of trade and investment ties between the U.S. and South Africa. His secondary responsibilities include assisting in the design and implementation of specific trade-related projects and assisting in the assessment of the agribusiness training needs of the host country.

This individual was chosen through a competitive all-sources U.S. Department of Agriculture hiring process. The mechanisms of this process were standard for filling an all-sources government vacancy, including the publication of the position description and the use of review panels.

This position was established under the aegis of the FAS Emerging Democracies Office. The Emerging Democracies Office, now the Emerging Markets Office, exists to expand U.S. agribusiness markets in emerging democracies around the world. Emerging Democracies are defined as countries that have or are moving towards a democratic form of government, that have or are moving towards a market-driven economy, that have a respect for human rights, and that have a willingness to establish a good relationship with the United States.

Not only does South Africa meet all of the criteria of an emerging democracy, but also the growing economy, western-style business practices and an advanced western-style infrastructure all contribute to the appeal of the South African market to U.S. agribusiness.

The Emerging Democracies Office's private sector assessment team to South Africa recognized the potential of the South African markets and also recognized the challenges offered by this previously isolated market. The economic growth and monumental policy changes spell opportunity for many American agribusinesses. However, historical repression and isolation left the market relatively unknown to U.S. companies looking for export markets. A dearth of trade and investment assistance available to interested U.S. agribusinesses motivated the recommendation of the assessment team for the establishment of this position. It is believed that the placement of an Agribusiness Advisor can provide great assistance in confronting these challenges.

USE OF PRIVATE SECTOR SERVICES OVERSEAS

Question. In maintaining a worldwide agricultural market intelligence and commodity reporting service, to what extent do you use U.S. private-sector sources located in the 132 countries covered by FAS? Is there duplication? Can recent technological advances streamline and improve the information gathering and reporting function of FAS?

Answer. Because the FAS reporting effort is concentrated on obtaining current year trade and crop production estimates and forecasts, while host country data are usually available only long after the fact, FAS field officers must develop a wide range of private sector contacts to carry out their intelligence mission. While many of the larger private trading companies keep their own data bases on production and trade, in most cases this is treated as proprietary information, available only when the companies choose to make it available. Therefore, so far as gathering and making information available to the general U.S. public is concerned, there is relatively little duplication of effort. FAS has historically been on the cutting edge of the use of computers to manage and transmit data, and is rapidly adapting its systems of transmitting data and of making reports available to the U.S. agribusiness sector on the Internet and the World Wide Web. Maintaining this technological lead, and the ability to supply information to U.S. agribusiness firms on a timely basis, will require continued upgrading of hardware and software systems.

IMPACT OF U.S. AGRICULTURAL EXPORTS ON FARM INCOME

Question. A USDA priority is enhancing the economic development of rural America by increasing agricultural exports and bolstering farm income. Does the Department have any analysis that demonstrates the relationship between exports and farm income on a bulk, intermediate, and high-value basis? In other words, what exports yield the highest returns to farmers, agribusinesses and rural communities, respectively?

Answer. Yes, the Department tracks the impact agricultural exports has on jobs and income. USDA's Economic Research Service regularly updates its input/output model of the U.S. economy that measures the economic activity triggered by agricultural trade. This model not only provides estimates on the impacts from total agricultural exports, it also separately calculates the impacts generated from bulk commodity and high-value product exports.

We know from this model that the farm share of total income from exports is higher for bulk commodities than for high-value products. The most recent figures indicate that farmers capture 42 percent of the total income generated by bulk exports, whereas this figure falls to 25 percent for high-value products. For all agricultural exports, the farmers' share of income from exports is 31 percent. High-value products differ from bulk commodities in that they are generally further processed or handled and stored in ways that add cost to the final sales price. When this happens the non-farm share of the final sales price is higher.

However, most of the additional income from exports that has flowed into the pockets of farmers around the country over the past ten years--say from the mid-1980s to 1994--has not come from bulk exports. Instead, most of the additional income generated from exports has come through high-value products as their total sales value rose from \$11.9 billion in 1986 to \$25.5 billion in 1994. During the same period, bulk sales rose from \$14.5 billion to \$18.0 billion. In 1995 and 1996, the focus has returned to the commodity markets as U.S. bulk exports surge. The main point is that while the farm share of a particular product category is important, it is equally important to understand which category has grown the fastest and which has the greatest potential for further growth in the near future.

Regarding the additional income U.S. agricultural exports generate for agribusinesses and rural America, this touches on the wider question of income generation in all the associated industries that are tied to the agricultural sector, in both rural and urban areas all across this country. U.S. agricultural exports totaled \$54.1 billion in fiscal 1995, which in turn generated an additional \$74 billion in supporting activities. Food processing companies captured \$6.5 billion of the additional \$74 billion, and the remainder was captured by other manufacturing, transportation, and service industries like banking. Much of these supporting activities took place in rural areas, employing people in towns all across America. If we break out this figure into its bulk and high-value portions, we estimate that the additional supporting activities generated by bulk exports totaled \$24 billion in fiscal year 1995, while the figure for high-value products was \$50 billion. The figures for food processors was about \$500 million from bulk exports and \$6 billion from high-value product exports.

ATO MIAMI

Question. The Department proposes opening an Agricultural Trade Office in Miami, Florida to take advantage of the potential access to high-value food markets and the ease of transportation. Is the FAS also willing to reexamine its current guidelines which forbid Cooperators from locating offices in the U.S.? I understand that a Miami ATO office was closed in the early 1980's. What were the circumstances surrounding its opening and subsequent closure. How has the situation changed?

Answer. FAS is studying the pros and cons of locating cooperator offices in the Miami ATO to service the Latin American and Caribbean markets. The ATO which was briefly established in Miami in the early 1980's was not established with a clear business plan and strategy, and tourist markets in the region were considerably less developed than they are today. FAS has been working closely with Florida officials, trading firms, cooperators, and others who have expertise on the patterns of trade in the Caribbean regions to make sure were a new office authorized, it would have defined goals which complement the efforts of other organizations doing trade development in the region.

FAS PRESENCE IN EUROPE

Question. For this subcommittee to fully understand the proposed expansion, consolidation and conversion of European Agricultural Trade Offices, could FAS account for its entire presence in Europe, including eastern Europe and the former USSR? How does this compare with private sector presence in these markets? How have U.S. agricultural exports to this region fared and is there potential for growth?

Answer. FAS has staff in 14 countries in Western Europe, and 12 countries in Eastern Europe and the former Soviet Union. In many cases, the FAS presence includes only one or two foreign national employees located in the embassy in the capital to carry out vital reporting activities, support for USDA programs, and liaison with the local Ministry of Agriculture. There is currently only one Agricultural Trade Office in Europe, a regional office for northern Europe located in Hamburg, Germany. FAS is in the process of converting a reporting office in Milan, Italy, into a regional Agricultural Trade Office for southern Europe, and establishing an Agricultural Trade Office in Moscow. While there is great private sector interest in some of the countries of the former Soviet Union (like Russia), in other countries in the region U.S. private trade interest has been limited. However, other U.S. government objectives, including support for the development of market economies and open trading systems, justify USDA program activities (training, exchanges, credit and assistance programs), and these programs need supervision and support. U.S. agricultural exports to Western Europe have been growing, though more slowly than exports to the Far East. U.S. agricultural trade with most Eastern European countries is quite limited, but countries of the former Soviet Union have been surprisingly strong markets for a number of high-value food products, like poultry leg quarters.

SANITARY/PHYTOSANITARY ISSUES

Question. During his testimony before this subcommittee, the Secretary noted that sanitary/phytosanitary issues would increasingly challenge U.S. agricultural access to markets. How does FAS plan to address this challenge in light of the Russian poultry flap, the detection of Karnal bunt infected wheat in the U.S., and the mad cow disease problem in Britain?

Answer. Shortly after Secretary Glickman announced the creation of an SPS Action Team on May 15, 1995, the Foreign Agricultural Service initiated an SPS

Working Group that meets every Tuesday to review the status of SPS issues that are currently threatening or have stopped U.S. agricultural exports. This group, which includes representatives from the Animal Plant Health Inspection Service, the Food Safety Inspection Service, the Agricultural Marketing Service, and the Economic Research Service, tracks SPS trade issues which have been raised by our overseas posts and industry contacts. The group discusses what actions have been taken to address the issue and what additional steps need to be taken to keep trade moving. When major issues emerge, like Karnal bunt and the mad cow disease problem, separate groups are established to track the issue on a daily basis.

ELIGIBILITY CRITERIA FOR THE MARKET ACCESS PROGRAM

Question. Since the FY 1996 Agriculture Appropriations Act changed the eligibility criteria for the MPP, now the MAP program, have any groups been excluded from participation? Has there been any delay in implementing the FY 1996 program? What does this mean for exports?

Answer. As a result of the fiscal year 1996 Agriculture Appropriations Act, the U.S. Mink Export Development Council and large for-profit corporations are no longer eligible to receive direct assistance under the MAP. In comparison with prior years, we have not experienced any delays in implementing the 1996 MAP. We expect the 1996 MAP allocations to be announced the first week of May. It is difficult to assess the impact of these changes on exports at this time because implementation will begin with the 1996 MAP funding allocations.

FACILITIES FINANCING

Question. Facilities financing under the Emerging Markets Program should encourage the sale of facilities and/or U.S. goods and services to address infrastructure barriers to increasing sales of U.S. agricultural products. What types of projects are anticipated and what commodities will most directly benefit?

Answer. Although we cannot say with certainty the types of agricultural related infrastructure that will be supported by CCC Facility Payment Guarantees, we anticipate interest in the program for the following projects:

1. Cold storage facilities and improvements to "cold chain" distribution. These projects would primarily benefit fresh and frozen fruits and vegetables, frozen food (i.e. meat, ice cream, prepared food, etc);
2. Port discharge and handling facilities which would benefit bulk grain and feed;
3. Intermediate processing projects (i.e. flour mills, feed compounding, extrusion) which would benefit bulk grain and oilseeds; and
4. Livestock operations (i.e. poultry and cattle) which would benefit breeding livestock, bulk grain, and meal.

DISTRIBUTOR DEVELOPMENT PROGRAM

Question. Are the funds provided to the State Departments of Agriculture to develop marketing techniques under the Federal/State Market Improvement Program (FSMIP) and to implement the new "Distributor Development Program"

in addition to those provided to the State Departments of Agriculture under the Cooperator Program?

Answer. Yes, these are separate initiatives.

Question. What is the "Distributor Development Program" and is the development of marketing strategies for specific groups of agricultural products the appropriate expenditure of government funds and resources?

Answer. The Distributor Development Program focuses on strategies pertaining to in-country distributor development, not on market development. The program's objective is to firmly establish distribution for U.S. foods in key emerging markets by using market research, buying missions and U.S. trade association promotions as part of a three year integrated strategy. The program is integrated in that local traders learn more about U.S. foods, while U.S. exporters learn more about local market interests and buying practices. The Distributor Development Program is designed to get importers and exporters to work together to develop an effective in-country distribution system for U.S. food products. The use of government resources to develop marketing strategies for specific groups of agricultural products is an appropriate investment to combat efforts of our competition by developing effective distribution for U.S. foods in markets with keen export potential such as those in Latin America, and Asia.

Question. What types of agricultural products do you intend to promote under this program? Isn't this function best done through the States and private companies?

Answer. We feel products such as fresh produce have particularly high potential in specific markets. To avoid duplication with existing market development programs by industry organizations and regional State trading groups, the program would only be used for groups of commodities which are currently handled by more than one Market Access Program participant. Once distribution has been established, further promotions would be handled by industry groups under the Market Access Program. However, transitional promotional funds would be provided for one year to encourage participants to develop cost-effective, jointly implemented strategies.

FUNDING FOR THE COOPERATOR PROGRAM

Question. Since fiscal year 1994, total spending for foreign market development has decreased from a level of \$56.56 to \$48.44 million. During this period, the appropriators have instructed FAS to maintain funding for the Cooperator program at the fiscal 1994 level of \$31.41 million. According to FAS, funding for the Cooperator Program has been: \$31.41 million in fiscal year 1994; \$20.757 million in fiscal year 1995; and \$22 million in fiscal year 1996. Could you comment on this? In particular, can FAS account for the \$9 million shortfall? Where was the money spent?

Answer. Since fiscal year 1995, FAS has maintained Cooperator Program activity level at the levels directed by the Committee. The \$9 million shortfall you reference, reflects the reduction in the level of new appropriated funding for the Cooperator Program approved by Congress in fiscal year 1995. At the direction of

the Committee, FAS has been offsetting this reduction though the use of carry over balances.

Question. This year you request an appropriation of \$26 million for the Cooperators, still less than we have previously instructed. Please comment on this shortfall?

Answer. The \$26 million is less than the amount required to support the Cooperator Program at prior year levels in the long-term. However, this funding level, coupled with the remaining carry over balances, should be sufficient to support the Cooperator Program activity level in fiscal year 1997 at the level of recent years.

COMPETITIVENESS IN THE FOREIGN MARKET DEVELOPMENT PROGRAM

Question. The President's budget states that beginning in fiscal year 1997, funds made available for the Cooperator program will be made available after a competitive allocation process. What does FAS have in mind? What will be the effect of these changes in implementing the marketing plans for fiscal year 1997?

Answer. Historically, the FMD has promoted basic program crops as a long-term venture by providing stable budgets from year to year, without annual competition by the commodity trade organizations. Beginning in 1998, however, all Federal programs must be in compliance with the Government Performance and Results Act (GPRA). The GPRA requires programs to develop strategic plans with specific goals and intermediate milestones. Performance measures will assess each program's effectiveness in achieving the broader goals and desired outcomes.

FAS sees great merit in adding a competitive allocation process to the FMD, and will begin the transition to a competitive allocation process in fiscal year 1997. While the administrative details have not yet been finalized, several options for implementing this competitive allocation process are being considered. Key to each option is the development of a program that will stimulate new and creative marketing initiatives, while providing a basis for secure short, medium and long term overseas marketing efforts through long-term agreements.

Question. Further with respect to the "new competitive basis" for awarding cooperator cost-share assistance in the Foreign Market Development Cooperator Program, why is this new? How were awards made previous to fiscal year 1997?

Answer. Introducing competition for funding is new because we currently do not have a competitive process for awarding assistance under the Foreign Market Development Cooperator Program (FMD). Traditionally, the FMD has been viewed as a long-term venture to promote basic program crops. As such, budgets were established for the commodity trade organizations to provide continuity from year to year. In addition, funding has been sufficient to finance all requests for assistance, so a competitive process has not been necessary.

Question. What elements constitute the line item "foreign market development" in the FAS budget?

Answer. The elements consist of the Cooperator Program for \$26 million, the International Trade Fairs Program for \$5.0 million, the Agricultural Trade Offices for \$13.8 million, the Federal/State Market Improvement Program for \$1.5 million, the Distributor Development Program for \$1.5 million and program administrative support, including salaries and expenses, for \$10.6 million.

AGRICULTURAL TRADE OFFICES

Question. How are the locations of new Agricultural Trade Offices (ATOs) determined? Is there any private-sector input?

Answer. Although authorized to establish up to 25 Agricultural Trade Offices by the Agricultural Trade Act of 1978, FAS has had between 13 and 15 ATOs since the program was first established in the early 1980s. ATOs have been opened in locations where analysis of trade trends and levels of market development activity indicated that FAS should place increased emphasis on market development activity. The collaborative nature of FAS' relationship with U.S. agricultural trade organizations and agribusiness enterprises in building overseas markets gives the agency the benefit of their insight concerning market growth prospects on an ongoing basis.

FUNDING FOR INTERNATIONAL PROGRAMS

Question. In presenting the President's budget for fiscal year 1997, Secretary Glickman indicated that the U.S. Department of Agriculture would be "continuing the Administration's strong commitment to export promotion by providing just under \$8 billion in program level for the international programs and activities in 1997". How does this \$8 billion break out by program?

Answer. I will provide the details of our budget proposals for international programs and activities for fiscal year 1997 for the record.

International Programs and Activities Program Level (Dollars in Millions)

Program	FY 1997 Budget
CCC Export Credit	
Short-term Guarantees (GSM-102)	\$5,000
(Supplier Credit Guarantees)	(250)
(Facilities Financing Guarantees)	(100)
Intermediate-term Guarantees (GSM-103)	<u>500</u>
Total, CCC Export Credit	5,500
Market Promotion Program	110
Export Enhancement Program	861
Dairy Export Incentive Program	67
Sunflower and Cottonseed Oil Assistance Programs	20
P.L. 480 Food Assistance	1,110
Food for Progress Program	115
FAS Salaries and Expenses	<u>180</u>
Total, International Programs	\$7,963

QUESTIONS SUBMITTED BY SENATOR BUMPERS

NORTH KOREAN FOOD AID

Question. Recently, there was a U.S. cash donation for North Korean food assistance that was used to purchase Thai rice. I understand this decision was made at a high level and a lot of deference was given to South Korean concerns. This raises the problem of how to draw the line between foreign policy and agricultural policy considerations.

To what extent was USDA consulted about this particular decision?

Answer. USDA was involved in preliminary discussions of food needs for North Korea. However, USDA-administered programs, i.e., P.L. 480 Title I and Food for Progress, were not considered for this situation. USDA was kept informed of the Administration's decision to provide a limited humanitarian gesture to meet critical food needs in North Korea. The funds provided were from the Agency for International Development's Office of Foreign Disaster Assistance, not foreign food aid program funds.

Question. Is there any statutory requirement of US AID or the State Department to consult with USDA on issues like this?

Answer. There is no statutory requirement for these two agencies to consult with USDA on the use of emergency or disaster relief assistance. Given the extenuating concerns with respect to providing humanitarian assistance to a country like North Korea, these agencies did informally consult with USDA as well as appropriate Congressional committees prior to the White House announcement of the assistance.

Question. Do you think there might be circumstances in which food assistance donations should be made with the concurrence of USDA?

Answer. I think it would be inappropriate for there to be a formal requirement for the concurrence of USDA on such donations. The current informal interagency consultation process appears to be sufficient for making decisions in such special circumstances.

Question. What actions can the Department take, or the government generally, to ease the concerns of farmers who perceive that they are too often the tools of foreign policy decision making and that their interests are always servient to "other" sectors of the government?

Answer. Decisions with respect to providing emergency or disaster relief assistance to a people at risk of starvation are normally not based on foreign policy considerations but rather humanitarian concerns. USDA administers several programs with market development objectives which are more appropriate for serving our farm interests, for example, the commercial export credit guarantee programs.

MARKET PROMOTION PROGRAM REFORMS

Question. In the 1996 Appropriations Act, we provided certain reforms to the Market Promotion Program (now the Market Access Program) and many of them were included in the new farm bill. How have those reforms changed your administration of the program?

Answer. The fiscal year 1996 Appropriations Act prohibited direct assistance to mink trade associations, large for-profit corporations and foreign for-profit corporations. Given these reforms, USDA cannot enter into agreements providing direct assistance to the U.S. Mink Export Development Council nor to those large corporations previously eligible for funding under the Export Incentive Program, a component of the MAP. The Department may only enter into MAP agreements with small business, cooperatives and trade associations. To the extent that any of the entities prohibited from receiving direct assistance through MAP were to seek funding through trade associations, they may be eligible to receive export promotion assistance.

QUESTION SUBMITTED BY SENATOR KOHL

DAIRY EXPORT INCENTIVE PROGRAM

Question. Mr. Schumacher, there has been some concern in the dairy industry that the current quarterly allocation process under the Dairy Export Incentive Program is cumbersome and that an annual allocation process would be preferable, both from a market development and an efficiency standpoint.

When will the DEIP rules calling for an annual (or longer) allocation process be announced? Will the rules be issued in time for the next DEIP announcement on July 1?

Answer. The current quarterly allocation process for DEIP is an interim process which was implemented during ongoing deliberations to reform export subsidy programs. As the review process comes to a conclusion, USDA intends to revert back to an annual allocation for the DEIP program.

SUBCOMMITTEE RECESS

Senator COCHRAN. This concludes today's hearing. We will have our next hearing on Thursday, the day after tomorrow, April 25, at 10 a.m., in this room, SD-138 of the Dirksen Senate Office Building. We will review at that time, the budget requests for the Department of Agriculture's rural economic and community development activities.

Until then, the subcommittee stands in recess.

[Whereupon, at 11:25 a.m., Tuesday, April 23, the subcommittee was recessed, to reconvene at 10:16 a.m., Thursday, April 25.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

THURSDAY, APRIL 25, 1996

**U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.**

The subcommittee met at 10:16 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran and Bumpers.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF HON. JILL LONG THOMPSON, UNDER SECRETARY FOR
RURAL DEVELOPMENT**

**ACCOMPANIED BY DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF
BUDGET AND PROGRAM ANALYSIS, DEPARTMENT OF AGRICULTURE**

RURAL UTILITIES SERVICE

STATEMENT OF WALLY BEYER, ADMINISTRATOR

**ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION
CORPORATION**

STATEMENT OF W. BRUCE CRAIN, DIRECTOR

RURAL HOUSING SERVICE

STATEMENT OF JAN SHADBURN, ASSOCIATE ADMINISTRATOR

RURAL BUSINESS-COOPERATIVE SERVICE

STATEMENT OF DAYTON J. WATKINS, ADMINISTRATOR

OPENING REMARKS

Senator COCHRAN. The hearing of the subcommittee will please come to order.

Today we continue our hearings reviewing the President's budget request for the Department of Agriculture, Rural Development, and Related Agencies. Today, we are specifically considering the budget request for rural development.

We are very happy to have Under Secretary for Rural Development Jill Long Thompson with us and Wally Beyer, who is Administrator for the Rural Utilities Service, and others.

I will ask you, Madam Secretary, if you would introduce those who have joined you at the witness table this morning. We have a copy of your statement. Thank you very much for that. We will make it a part of the record in full. I would encourage you to summarize your written statement, if you would like, and to make any other additional comments you think would be appropriate for the consideration of the committee. We will then be able to discuss your testimony and ask some questions of the panel.

Welcome. You may proceed.

Ms. LONG THOMPSON. Thank you, Mr. Chairman. It is a pleasure, indeed, to be here.

Senator COCHRAN. Wait just a minute.

I'm sorry, but do you have an opening statement, Dale?

Senator BUMPERS. No; I don't have an opening statement. Go on ahead.

Senator COCHRAN. Please proceed.

OPENING STATEMENT OF UNDER SECRETARY

Ms. LONG THOMPSON. Thank you, Mr. Chairman. It is certainly a pleasure to be here and a privilege to appear before your committee. I am looking forward to the opportunity to share with you the President's budget proposals for this mission area and its programs.

I will introduce Bruce Crain, who is the Executive Director of the Alternative Agricultural Research and Commercialization Corporation; Dayton Watkins, who is the Administrator of the Rural Business-Cooperative Service; Jan Shadburn, who is the Associate Administrator of the Rural Housing Service; and, as you mentioned, Wally Beyer, who is the Administrator of the Rural Utilities Service. Then we also have Dennis Kaplan, Deputy Director of OBPA.

Senator COCHRAN. That means the Budget Office, doesn't it?

Ms. LONG THOMPSON. Yes; a fairly significant part of our operation.

As you suggested, I will summarize my remarks. But I do want to emphasize to the subcommittee that what the President has requested, I think, is a reflection of the commitment that he has to rural America. The funding proposed by President Clinton is an unmistakable signal that this administration believes that the economic problems faced by rural residents continue to require a strong and an effective partnership between the Federal, State, and the local governments.

This budget is consistent with the President's belief that jobs create increased opportunity and long-term community stability. Federal resources can help ensure that rural communities have access to certain basic services, like safe drinking water and health care, decent and affordable housing, telecommunications, education, and transportation. This is to ensure that rural businesses and workers can compete in the global economy, which will lead to economic growth, business expansion, and increased employment.

We believe that all Americans, urban and suburban, would do well to better understand what happens in rural America. Eighteen percent of this Nation's jobs and 14 percent of this Nation's income were produced in rural counties in 1992. During the last 20 years, median family income in real terms in rural America has decreased

from \$27,000 a year to about \$25,000. Approximately 400,000 rural Americans don't have safe drinking water in their homes. The vast majority of small systems in violation of drinking water, clean water standards, are eligible to participate in the Rural Utilities Service programs. Also, 535 rural counties endure persistent poverty, with more than 20 percent of the residents below the poverty level continuously in 1960, 1970, 1980, and 1990.

This administration is very committed to working closely with communities in tackling the important issues of jobs, trade, and the preservation of a way of life in rural America for our citizens who live in rural America. We stand ready and willing to continue to work with the Congress to improve conditions in rural America, and, while more can always be done, significant progress has been made because there has been such a strong commitment, not just on the part of this administration, but on the part of the Congress in a very bipartisan way.

In the President's State of the Union Address, he articulated the parameters of the mission area's relationship with the people, with the businesses, the communities, and organizations across rural America. I will quote from his address.

We know big government does not have all the answers. We know there's not a program for every problem. We know and we have worked to give the American people a smaller, less bureaucratic government in Washington, and we have to give the American people one that lives within its means. The era of big government is over, but we cannot go back to the time when our citizens were left to fend for themselves. Instead, we must go forward as one America, one Nation, working together to meet the challenges that we face together. Self reliance and team work are not opposing virtues. We must have both.

To do this rural development needs to now, more than ever before, work closely to build partnerships between the Federal, State, and local governments, the private sector, tribal and community groups, foundations, and others.

We believe that the key to growth in rural America in the future lies with partnering with State and local governments and with the private sector. It is a philosophical change that represents a new relationship, but it is working, and we believe that it needs to be expanded upon.

Some of the examples of partnerships that have had success in this administration include the Pacific Northwest, where we have been working with State and local governments, as well as the private sector, in addressing the economic ills in a region of our country where the economy has been impacted by changes in the timber industry. President Clinton's Empowerment Zone/Enterprise Community Initiative has helped prove that some of the best ideas and initiatives that address community problems are those that are initiated at the local level, within the communities themselves.

In addition to partnering, we are working to reorganize in the Department of Agriculture to more cost effectively, more efficiently, and more effectively address the problems and reach our constituents. As a result of that reorganization, the rural development mission area, which we all represent, is now comprised of the three agency areas: the Rural Utilities Service, the Rural Business Cooperative Service, and the Rural Housing Service.

In addition to that reorganization, we are in the process of changing the way we service our single-family housing loan port-

folio. The Dedicated Loan Origination and Servicing System [DLOS] Program that I know you are familiar with is on schedule, on mark to be in place so that we can better serve our clients and, at the same time, more cost effectively do so.

Another area where we are working to reinvent the way government operates and be more cost effective is in the Rural Performance Partnership Program, or the Rural Community Advancement Program, in which we would give more flexibility at the State level so that the funds that are appropriated can reach the communities and serve the communities in the best way, as determined at the local level, rather than by centralized decisionmaking within the Department of Agriculture.

Then, finally, another initiative that is very critical and we believe very important is the Water 2000 Initiative. As you know, we have conducted a needs assessment on rural water needs and have come to the conclusion that there is about a \$10 billion need out there. We still have close to one-half of a million homes in rural America that don't have running water.

So we have a number of things that we are addressing and working on and working in the best way to get the dollars leveraged to reach as many communities that do have the greatest need and to meet those needs as best possible.

With that, I will close my remarks and would be glad to answer any questions that you may have. I hope that I didn't go on too long.

I learned on the House side that the appropriation is inversely related to the length of time that a witness speaks. So I hope I have been sufficiently brief.

PREPARED STATEMENTS

Senator COCHRAN. You have, indeed. We appreciate your summarizing your statement. We have your complete statement, and it will be made part of the record along with the statements of Mr. Beyer, Mr. Crain, Ms. Kennedy, and Mr. Watkins.

[The statements follow:]

PREPARED STATEMENT OF JILL LONG THOMPSON

Mr. Chairman, Members of the Subcommittee, I am pleased to present to you today the fiscal year 1997 budget request for the agencies of the Department of Agriculture's Rural Development mission area, and to discuss rural America and the very significant impact that we can—and are—having on the lives of millions of people. To expedite my testimony, I will summarize my remarks and submit my entire statement for the record.

President Clinton's budget proposal for fiscal year 1997 represents a \$2 billion increase over current estimated program levels for the programs administered by the agencies that compose the Rural Development mission area. The funding proposed by President Clinton is an unmistakable signal this Administration believes that the economic problems faced by rural residents continue to require a strong and effective partnership between the Federal, State, and Local governments.

The budget is consistent with the President's belief that jobs create increased opportunity and long-term community stability. Federal resources can help ensure that rural communities have access to certain basic services—safe drinking water, health care, decent and affordable housing, telecommunications, education and transportation—so that businesses and workers can compete in the global economy which will lead to economic growth, business expansion and increased employment.

All Americans—urban and suburban—would do well to better understand rural America.

- 18 percent of this nation's jobs and 14 percent of this nation's income were produced in rural counties in 1992.
- During the last 20 years median family income—in real terms—of families in rural areas has decreased from \$27,000 to about \$25,000.
- Approximately 400,000 rural Americans do not have safe drinking water in their homes. The vast majority of small systems in violation of drinking water clean water standards are eligible to participate in the RUS programs.
- 535 rural counties endure persistent poverty, with more than 20 percent of the residents below the poverty level in 1960, 1970, 1980, and 1990.

This Administration is committed to working closely with communities in tackling the important issues of jobs, trade and the preservation of a way of life for rural Americans as our nation enters the next century. We stand ready and willing to continue assisting with the Congress to improve conditions in rural America. While more can always be done, significant progress has been made.

Yet traditional Federal programs are not the cards we hold for the future. We need a new approach, new ideas, and a new emphasis on what the Federal Government can do and what it can do well.

In his State of the Union Address, President Clinton clearly articulated the parameters of the mission area's relationship with the people, businesses, communities and organizations across rural America. He said, "[W]e know big government does not have all the answers. We know there's not a program for every problem. We know and we have worked to give the American people a smaller, less bureaucratic government in Washington. And we have to give the American people one that lives within its means. The era of big government is over. But, we cannot go back to the time when our citizens were left to fend for themselves. Instead, we must go forward as one America, one nation, working together to meet the challenges we face together. Self-reliance and teamwork are not opposing virtues. We must have both."

To do this, Rural Development needs to—now more than ever before—work closely to build partnerships between Federal, State, Local governments, the private sector, tribal and community groups, foundations, and others.

Looking toward the 21st century, I envision the Rural Development mission area bringing other private and public financial resources, a skilled and dedicated staff, technical resources and assistance, and the ability and experience to the rural development table.

The key to all of our future efforts on behalf of rural America and the people who live there is what we can do by working together. A partnership does not mean an exclusively Federal way of doing business. The days that Federal resources can be thrust on local governments—with all the regulations and requirements and strings that come attached to Federal aid are gone. We simply do not have the financial resources, staff or belief that this approach works best.

This is a philosophical change that represents a new relationship that is working—and needs to be expanded upon. We are already working in partnerships to build water and wastewater systems; finance decent, affordable housing; support electric power and rural businesses, including cooperatives; and supporting community development with information, credit and technical assistance. We already have ample experience to draw upon in seeing the positive results that this approach can generate.

In the Pacific Northwest, for example, the Rural Development mission area has been a key player in addressing the economic ills of a regional economy impacted by changes in the timber industry.

State governments in Oregon, Washington, and California, a dozen Federal agencies, and numerous local governments were brought together through Community Economic Revitalization Teams to address the consequences of a regional economic dislocation. Working through these Community Economic Revitalization Teams, we have been able to make a significant impact, helping develop long-term solutions to the problems rural Americans face in the region, and working together with groups that had not previously worked together. This partnership has helped build medical clinics and multi-family housing projects, provided clean drinking water for rural families, and created seed money to establish small businesses in timber reliant/dependent areas.

President Clinton's rural Empowerment Zone/Enterprise Community initiative helped prove that some of the best ideas and initiatives that address community problems are those that are initiated at the local level. Instead of telling local governments what the problems were and how those problems needed to be solved, the EZ/EC process has asked local residents to identify and help solve their own problems.

The mission area's staff offered technical assistance, showed communities how to build effective partnerships, and taught people how to design economic and commu-

nity development plans. The ideas, initiative, and efforts were driven at the local level—not by the Federal Government.

As in the Pacific Northwest, the EZ/EC initiative showed remarkable success. Communities that went through the application process succeeded in getting a clearer idea of their own potential and learned that by working together they could realize that potential.

In addition to the work with partnerships, a new sharper focus on rural development took shape with the recent reorganization of the USDA. Rural development work is more focussed and in three new organizations reporting directly to the Under Secretary for Rural Development. These organizations are: the Rural Housing Service (RHS); the Rural Business-Cooperative Service (RBS), and the Rural Utilities Service (RUS).

Here are some of the specifics about what we have been doing and what we think should be done.

The President has told Federal agencies through the National Performance Review (NPR) to change the way business is conducted. I can say with pride that Rural Development appears to be ahead of most agencies in implementing NPR. Our efforts have been guided by the principles set forth by President Clinton and Vice-President Gore in the National Performance Review initiatives: streamline government operations, improve customer service, empower employees, and re-engineer business practices to improve effectiveness and efficiency. Rural Development is focusing on customers, placing greater responsibility with field managers, and developing benchmarks and accurate performance measurements.

Rural Development is committed to delivering quality service—service equal to the best available in the private sector. A critical component of the President's National Performance Review is our new Dedicated Loan Origination and Servicing (DLOS) System. This system will bring servicing of the single family direct loan portfolio into the twenty-first century. Supported by Congress through legislation in 1987, DLOS, when fully operational, is expected to contribute to a balanced Federal budget by saving \$250 million over the next five years and more than \$100 million a year annually thereafter. RHS will initiate DLOS operations in St. Louis, Missouri on October 1, 1996. We expect that it will be fully functional by October 1, 1997.

In addition, Rural Development is committed to streamlining the existing field structure. Our field offices are being collocated and consolidated with the offices of the Farm Service Agency and the Natural Resources Conservation Service to provide a single USDA service center for customers to obtain information and services.

The mission area has several other important initiatives beyond those contained in NPR.

Since 1994, the Department of Agriculture (USDA) has coordinated its efforts with private citizens, businesses, foundations, non-profit organizations and tribal, State and Local governments and other Federal agencies to aid the thousands of rural families who are without a basic necessity—safe, affordable running water in their homes.

This initiative is called Water 2000. Our State Offices completed a comprehensive "Needs Assessment" and found that rural water needs are in excess of current funding by approximately \$10 billion. State RECD Offices are trying to make the best use of loan and grant funds available. Priority has been placed on human health concerns to make sure we help those who are at the greatest risk—yet, we are in desperate need of additional resources.

Again this fiscal year, the Administration proposed a Rural Performance Partnership Program (RPPP) as part of the budget.

Presently, Federal rural economic development programs have been funded program by program. Funds are distributed through allocation formulas, and projects have to meet specific eligibility criteria to receive funds. The Rural Performance Partnership proposal would modify this by authorizing a limited transfer of funds from program to program in order to better address the needs of local communities. In addition, this proposal would authorize assistance in the form of grants, direct loans or loan guarantees, or any combination of the three. This would enable our offices to tailor assistance to local needs.

The Rural Performance Partnership will require that projects be evaluated in a competitive system which considers community needs, priorities and capacity—as well as project quality—rather than simply rely on a "first come, first served" basis for funding.

We have very capable staff throughout the country, but predominantly limit them to jobs dealing with a single program. We propose to retrain our field staff and give them the skills needed to work with State and Local governments, the private sector, and others in developing projects that contribute to the economic improvement of rural areas. Few have been given the opportunity to work with the total array

of programs. This practice has been restrictive, not only for the employees, but the people we serve as well.

We have been heartened by the positive response the President's proposal received in Congress. This committee last year partially accepted the Administration's proposal as part of the fiscal year 1996 appropriations act, and the rural development provisions of the Farm Bill recently signed into law by President Clinton, authorizes most of the elements of the Rural Performance Partnership proposal.

We urge the Committee to appropriate funds in a manner consistent with the Farm Bill. This process will foster the flexible and innovative approaches to rural development and will allow us to work closer with the communities we serve.

I would now like to review the specific budget requests.

RURAL UTILITIES SERVICE

For rural electric and telephone activities, we are requesting a program level of \$1.7 billion including \$175 million for the Rural Telephone Bank (RTB). We will be proposing legislation to facilitate the eventual privatization of the RTB. A little over \$145 million is proposed for the distance learning and medical link programs. We are again requesting funds for a distance learning—medical link loan program. As you well know, there is significant demand for this program and the least costly means of meeting that demand is a loan program that works in conjunction with grants similar to the successful water and wastewater loan and grant program. We are pleased to see the Congress provided for this new authority in the Farm Bill. The request for water and waste disposal activities in support of our strong commitment to the Water 2000 initiative is \$1.4 billion dollars is requested. The Budget proposes that the amounts provided for the water and waste disposal programs be available interchangeably under the Rural Performance Partnership Program. That would also be consistent with the Farm Bill.

The total budget authority required for the rural utilities programs is \$727 million.

RURAL HOUSING SERVICE

For rural housing, the budget requests a program level of \$3.7 billion for single family housing of which \$2.4 billion is for guaranteed loans. Included in the guaranteed loans is \$100 million proposed specifically for graduation of current direct loan borrowers to commercial credit. For multi-family housing loans, we are requesting \$220 million. We are also proposing legislation which would lower the subsidy rate for this program by making available the option of a balloon payment for nearly mature loans. For rental assistance which makes housing available for the lowest income rural residents, the request includes \$541 million. The request for the other housing programs which support farm labor housing, repair of homes owned by elderly rural residents, correction of construction defects, the preservation of usable housing in rural areas, and the sale of inventory property, brings the total housing program request to \$4.7 billion. Loans for community facilities are requested at the \$300 million level.

The budget authority required for the \$5 billion housing and Community facility program request is \$862 million.

RURAL BUSINESS-COOPERATIVE SERVICE

To promote jobs in rural areas, a total program level of \$968 million is request for rural business programs. This includes \$800 million for business and industry direct and guaranteed loans, \$80 million for loans to intermediary lending organizations, and \$45 million for rural business enterprise grants. The budget request also includes \$7 million for program activities of the Alternative Agricultural Research and Commercialization Center.

The budget authority required for RBS programs is \$101 million.

ADMINISTRATIVE EXPENSES

For administrative expenses for the agencies within the mission area, we are requesting a total of \$555 million.

Mr. Chairman, the request for administrative expenses is a crucial part of this budget. The implementation of DLOS and successful delivery of these programs cannot occur without this level of funding. We are continuing to streamline our operations and consolidate offices while simultaneously maintaining a high level of customer service. But, our success in accomplishing this is very dependent on maintaining an adequate level of funding for administrative support.

The Implementation of DLOS will enable us to eliminate 600 positions and redirect 900 other positions from servicing single family housing loans to other positions throughout the Rural Development programs. This will increase significantly our ability to deliver these programs more cost-effectively and more efficiently and improve the chances for success of our program recipients. However, the full impact of these staff reductions and redirections due to DLOS will not occur until fiscal year 1998.

Mr. Chairman, this concludes my statement. The Administrators and I will be pleased to answer any questions that you or members of the Subcommittee may have. Thank you for allowing me the opportunity to present to you our fiscal year 1997 budget request.

PREPARED STATEMENT OF WALLY BEYER

Mr. Chairman and Members of the Subcommittee, I am pleased to accompany Under Secretary Jill Long Thompson and present the 1997 Budget and Program Proposals for the Rural Utilities Service. I want to thank the Subcommittee for the support you are providing to Rural America.

The character of this Nation is rooted in Rural America. Despite the urbanization of the population, Rural America still comprises more than 80 percent of the American landmass. The investment we as a government have made in the infrastructure of Rural America has benefited the citizens who live there and the entire country. This investment has paid dividends in increased economic productivity, better access to health and education opportunities, and a modern agriculture that is a part of the global economy. Living in the Great Plains most of my life, I know firsthand the benefits of our rural electric, telecommunications, and water programs. The safety net that the government has provided through the years is just as important today and in the future as it was fifty-years ago.

Rural America is still challenged by time and space. New technologies offer tremendous opportunities to bridge these challenges as never before. This is truly an age of opportunity. That does not mean that all problems are solved or that we will automatically be able to take advantage of the new technologies. The infrastructure that was put in place more than 60 years ago is in continued need of replacement and improvement due to obsolescence, aging and advancements in technology.

Characteristics such as low density in population, remoteness and distance still challenge rural America. Many rural communities do not have the medical specialists or updated medical equipment that play a major role in maintaining and improving our lives. The information systems that are vital to our everyday existence in commerce, health, and education are not as prevalent in rural areas. Access to the information superhighway is often difficult and expensive.

It is hard to imagine, but in this modern day and time we have areas with families that are drinking unsafe water, families without plumbing and wastewater facilities. These are vital health concerns regarding safe drinking water and sanitary waste disposal. Towns and communities of less than 10,000 people often lack the tax base and bonding authority to create, update, or repair water and waste disposal infrastructure needs.

The Rural Utilities Service is a catalyst for that public/private partnership that has been so effective in the history of these programs. The electric and telecommunications industries are undergoing fundamental changes as a result of increased competition, deregulation, and developing technologies. The Rural Utilities Service (RUS) must maintain its essential leadership role, not only in the area of rural infrastructure, but also as a successful Federal model of partnership with local industry, and with the communities they serve. In addition to being a pioneer in providing credit and establishing service standards for a utility infrastructure in sparsely populated areas, RUS "primes the pump" of private sector investment. This has generated a far greater growth in development of an infrastructure and the creation of employment. In addition to this leadership, RUS is the single agency which provides overall policy implementation of rural infrastructure financing programs for telecommunications, electric, and water and waste disposal.

WATER AND WASTE DISPOSAL PROGRAM

Water and waste disposal is basic infrastructure that is vital to both health and economic development. The Water and Waste Disposal Program administered by RUS provides loan and grant funding to bring fresh, safe drinking water to rural Americans and bring sanitary and environmentally sound waste disposal facilities. If economic growth is going to occur in an area, adequate water and waste disposal facilities are mandatory.

These programs are an investment in the rural citizens and small communities they serve. The programs impact the lives of rural Americans in all 50 states as well as U.S. Territories. Sanitary and environmentally sound water and waste disposal facilities are key to protection against serious, often life-threatening illnesses related to water contamination, such as *Cryptosporidium**, gastroenteritis, cholera, typhoid, and salmonella. (**Cryptosporidium* killed more than 100 people in Milwaukee, Wisconsin in April of 1993). The combination of the loan and grant programs will provide safe, affordable drinking water to an estimated 782 thousand rural households and an estimated 2.2 million people. This program consistently has more requests than funds available. State RECD Directors have for several years done an outstanding job of mixing grants, loans, state and local funds to finance the projects with the most need. The reduction by 30.6 percent in funding in 1996 compared to 1995 created tremendous pressures on the program. Because of the Administration's belief that low income and poverty areas represent the greatest need, water and waste disposal loans and grants are targeted for those areas. In this day of high technology, we still have some of our citizens living in third-world conditions.

Water 2000 Initiative

Across rural America, an estimated 400,000 rural households are without the basic necessity of safe, affordable running water in their homes. This will affect an estimated 1.2 million people. Water 2000 is an initiative to clearly assess the needs of rural America so that we can target our programs to meet these needs. Our State office staffs have estimated that about \$10 billion is needed to make necessary improvements in rural water systems. The Environmental Protection Agency (EPA) is in the last stages of its own drinking water needs assessment. Their study is aimed primarily at water treatment. Areas without a public water system may not be covered in their study.

A good example of the value of this program is a project just funded to provide a new water well and water distribution center for the White Mountain Apache Tribe in Arizona. The tribe has suffered from a number of chronic health problems, including severe diarrhea among the children of the tribe. The health concerns that have caused a number of deaths, have been directly tied to the tribe's water supply, contaminated by sewage and solid waste. A combined loan and grant from the Rural Utilities Service will enable the tribe to solve that problem.

The RUS Water and Waste regulations will be streamlined. We expect to propose new regulations during the first half of 1996 to remove obsolete provisions, clarify wording to help both the public that will be filling out the applications and the RUS field staff that work with the program on a day to day basis, tightening the grant criteria to make sure those with the greatest need will be first in line, and shortening the entire process to enable applications, reviews, and decisions to be made in a more reasonable timeframe.

Most water systems loans and grants approved since the Water 2000 announcement have at least a component of meeting the Water 2000 goal. The Water and Waste Disposal programs also support the Presidential Initiative for Empowerment Zones and Economic Communities and the Colonias initiative. Adequate funding of these programs is a necessary investment to address the health and safety needs of rural America. We support the Farm Bill provisions that targets funds to Colonias and Alaskan natives.

Water and Waste Disposal Budget

The budget requests \$800 million for loans and \$590 million for grants for the water and waste disposal programs. In fiscal year 1996 Congress appropriated a total budget authority of \$488 million for these programs within the Rural Utilities Assistance Program. This new program has worked well in providing our State Directors the flexibility to manage these funds and we encourage Congress to continue to appropriate funds in this manner. This program was a critical component of the Administration's Rural Performance Partnership Initiative which is designed to permit State Directors the opportunity to tailor assistance to local needs.

TELECOMMUNICATIONS

The technological explosion that is occurring in the telecommunications industry will mean new tools to increase opportunities for rural America. The Information Superhighway will help rural America survive, prosper, and compete. It brings the entire world to the door of our rural citizens, farmers and businesses. Whether it involves regional communication or helps find new markets throughout the world, access to the Information Superhighway is vital to the future of rural America.

The RUS Telecommunications Program provides a cost-effective vehicle for assisting rural telecommunications providers in building the infrastructure for the Information Superhighway in rural America. The Program provides capital, establishes telecommunications standards, and provides policy guidance for rural telecommunications in the National Information Infrastructure initiative. This service is needed more than ever with the passage of the Telecommunications Act of 1996. The rural telecommunications infrastructure is a national asset connecting rural communities to the mainstream global economy.

Telecommunications Program Budget

The 1997 budget requests: 1) a \$300 million loan level for treasury rate loans, at a \$60 thousand cost to the government; 2) \$120 million in guarantee of direct FFB financed loans, at no cost to the government; and 3) a \$75 million loan level for 5 percent hardship loans, at a cost to the government of \$1.193 million.

Rural Telephone Bank

Congress created the Rural Telephone Bank (RTB) to address the increasing need for capital to develop rural telecommunications services. The RTB works in conjunction with the Telecommunications Loan Program. In the 1996 appropriations bill, Congress required that no more than 5 percent of the Class A stock be retired. A study on how privatization will impact borrowers' ability to obtain capital is in progress and staff recommendations will be made to the RTB Board of Directors in May of 1996. RTB's capital structure consists of Government and borrower equity contributions and outstanding long-term Treasury debt. Privatization refers to the retirement of the Government's equity contribution (Class A stock worth \$592 million). In fact, the borrowers today own a greater equity share than the Federal Government through their ownership of Class B and C stock worth \$700 million. Approximately \$584 million is in Class B and \$116 million is in Class C stock.

Over the life of the program, the RTB has lent more than \$3.1 billion to rural telecommunications borrowers to help build, maintain, and upgrade the rural telecommunications infrastructure. Currently, the RTB is in a strong financial position with more than \$1 billion in net worth.

The passage of the Telecommunications Act of 1996 will accelerate the competitive environment for telecommunications. Privatization of the RTB, and technical changes in its authorizing statute, would allow borrowers to leverage existing net worth by borrowing additional capital from private financial markets. More discussions on the effect of privatization and the nature and strength of the RTB upon privatization will take place this year.

Distance Learning and Telemedicine Program

The Distance Learning and Telemedicine Grant Program has been a resounding success and has begun to make a difference in rural communities. Since 1993, this program has provided 90 grants, totaling \$27.5 million, to rural schools, hospitals, and medical clinics in 39 states. As a result of implementing these educational and medical networks, telemedicine facilities will enhance the rural health care delivery of 438 hospitals and clinics in 23 states, and distance learning facilities will dramatically improve the educational capacity of approximately 232 rural schools, serving more than 170,000 rural students. Also as a result of these local and regional networks, over 18,000 rural residents will receive Internet access.

Through three years of program activity, approximately 230 rural schools, serving more than 500,000 rural students, will gain access to improved educational resources through the Information Superhighway by sharing limited teaching resources and gaining access to libraries, training centers, vocational schools, and other institutions located in metropolitan areas. For telemedicine, approximately 112 rural medical facilities, serving more than 134,000 rural patients, will access improved medical care through linkage with other rural hospitals and major urban medical centers for clinical interactive video consultation, distance training of rural health care providers, management and transport of patient information, and access to medical expertise or library resources.

Distance Learning and Telemedicine Grant Budget

The budget requests \$20.261 million for fiscal year 1997. This is a \$12.761 million increase over the amount appropriated for fiscal year 1996. The demand for this program continues to grow, even if the available funds do not. The passage of the new Telecommunications Act of 1996 will help lay "the cable" to the doors of rural schools and health care centers. The grant program provides help once inside the door. We are in the process of revising the regulations to streamline the process, make sure scarce Federal resources do the most good and describe in plain English

the criteria by which grants are made. The appropriation for the program the past two years has been \$7.5 million.

Distance Learning and Telemedicine Loan Program

RUS has proposed to stretch the limited funding for the Distance Learning and Telemedicine Grant Program by adding a loan component to the existing grant program. The proposal was part of the Farm Bill signed by President Clinton. The addition of a loan component will help meet the demand for the program in the most cost effective way. Under the proposal, any qualified provider of education and health care services may apply for grants and loans or a combination of grants and loans. A portion of this program will be available at five percent interest to help the lowest income communities. The largest share will be available at the Treasury rates, allowing a very small subsidy to leverage a significant amount of loans.

Distance Learning and Telemedicine Loans Budget

The budget request is for \$125 million at a cost to the government of \$2.03 million. This will be divided between \$50 million for 5 percent loans and \$75 million for loans to be made at the Treasury rate.

ELECTRIC PROGRAM

The Electric Program represents one of the most effective public-private partnerships in the history of our Nation. The Electric Program has worked with consumer-owned rural electric cooperatives to bring electricity to rural America. It serves as a cost-effective means of financing and maintaining the nationwide network of a rural infrastructure.

Rural electric borrowers serve approximately 25 million people and cover more than 75 percent of the land mass in 46 states and territories. Since the program was created by Congress in 1936, it has extended credit to approximately 1,000 rural electric cooperatives, bringing electricity to areas when investor-owned and municipally-owned utilities failed to provide this basic service. Rural Electric cooperatives own 2.2 million miles of line, serving an average of 5.5 customers per mile. This compares to an average of 35 customers per mile of line that their city cousins serve. These figures reflect both the investment and the price of operations of the utilities involved.

The Electric Program continues to have a leadership position in lending for rural electric infrastructure. RUS continues to provide up to 70 percent of the project funding for many of the rural electric cooperatives. With the rapidly changing structure of the electricity industry, the role of RUS to provide stability and a somewhat level playing field for rural consumers is going to be greater than ever before.

A relatively small Federal investment leverages a private capital investment by approximately four times. As deregulation of the electric utility industry occurs at the wholesale level, and inevitably at the local retail level, it is going to be critical to have a rural safety net to ensure that rural consumers can still be served in an era of competition with quality, reliable electric energy at reasonable costs.

Electric Program Budget

For 1997, the President's Budget requests: 1) a \$600 million loan level for municipal rate loans, with a cost to the government of \$32.28 million; 2) a \$125 million loan level for 5 percent hardship loans, with a cost to the government of \$3.625 million; and 3) a \$400 million loan level for guaranty of direct FFB-financed loans with a cost to the government of \$3.72 million. The 1997 budget request reflects a net increase in direct electric loan levels of \$190 million, compared to the loan level of \$935 million available in 1996.

It is wise public policy to maintain, upgrade, and when needed, replace, the national rural infrastructure. Otherwise the investment in this infrastructure can be lost, much like what would happen if we ignored the maintenance of our Federal highway system. It will be far more expensive if we have to rebuild it from the ground up several years down the road.

Administrative Budget

The budget requests \$70.443 million in Administrative expenses of fiscal year 1997, \$5.4 million more than fiscal year 1996. The increase results from the need to improve financial operations information systems identified in the Agency's multi-year Information System Plan and identified as a critical management issue by the USDA Chief Financial Officer and OMB, in addition to general increases for inflation and increased costs of doing business.

CONCLUSION

The goal of this Administration in "reinventing government" has been to make the Federal Government more responsive to the people it serves. RUS has been working to that end. In the telecommunication program, RUS has already reduced the time it takes to process a loan from an average of six months, prior to 1992, to a current average of 90 days. For the electric program it was taking an average of a year to process loans, currently RUS is turning those around in three to four months. Changes in the water and waste disposal program are under review, but reducing paperwork, removing obsolete language, and using plain English will make this program more user friendly.

Additional changes in regulations will place more responsibilities on borrowers in turn for fewer rules, regulations and oversight. This will be done while still protecting the taxpayers' investment in providing and maintaining this vital infrastructure in the less populated areas of our nation with the greatest need.

The Rural Utilities Service's electric, telecommunications and water and waste disposal programs are highly cost effective, private capital leveraging, infrastructure programs which are needed to ensure that rural economic development can occur and that rural Americans can contribute to the National economy and global competitiveness into the next century.

 PREPARED STATEMENT OF W. BRUCE CRAIN

Mr. Chairman and members of the Committee, I am happy to testify today on the President's fiscal year 1997 budget proposal for the Alternative Agricultural Research and Commercialization (AARC) Center. Thank you for the opportunity to provide you an update on the AARC Center and the impact AARC investment dollars are having in rural communities.

The Farm Bill recently signed by President Clinton will convert the Alternative Agricultural Research and Commercialization Center to the Alternative Agricultural Research and Commercialization Corporation, a wholly-owned government corporation within the Department of Agriculture. The Farm Bill will require changes to the structure and authorities of the Center. The Department is moving to implement the provisions of the Farm Bill expeditiously.

As the Committee is aware, the AARC Center was created by Congress in 1990 to expedite development and market penetration of industrial (non-food, non-feed) products from agricultural and forestry materials and animal by-products. This unique venture capital center assists the private sector in bridging the gap between research results and commercialization of that research. It is the only agency in the Federal Government making equity investments in new rural business ventures.

Congress established the AARC Center as an independent venture capital entity offering equity investments. The last thing start-up businesses need is more debt. It is difficult to attract early stage venture capital from any source, particularly in rural communities. Because the AARC Center takes an equity position, this capital investment becomes an asset, not a liability. Early equity investments made by the AARC Center serve as the catalyst to attract additional investment dollars later in the commercialization process. Thus, AARC Center partners may be better able to qualify for additional conventional financing from government or private sources.

Paul Goodrich, a principal with William D. Ruckelshaus Associates, a Seattle, Washington-based venture capital firm, says, "From the standpoint of private investors who are unable or unwilling to make seed capital available for start-up businesses with new technologies, the AARC Center's early investments lend the credibility necessary to attract private sector equity or debt financing. By placing a 'USDA stamp of approval' on these ventures, the door of opportunity linking new companies and private investors is thereby opened."

In three years of operation, fiscal year 1993-95, AARC invested \$21 million, matched by \$73 million from private partners, in 54 projects in 28 states, to promote new, innovative, and environmentally friendly uses for agricultural materials. The AARC Center requires at least a one-to-one match from the private sector partner and negotiates a payback arrangement for each project. Repayments involve equity or royalty arrangements, or a combination thereof. The private-public ratio is currently exceeding three-to-one. In other words, each \$1 invested by the AARC Center in projects, means \$4 will put to work in rural communities.

Job creation is an essential criterion for receiving funding from the AARC Center. Since plant matter is quite bulky to transport, factories that use these materials as industrial feedstocks must be located as near to the farm gate as possible if the end products are to be competitive with petroleum-based products. AARC Center investments therefore create new, real, and lasting jobs as these factories are located in

rural areas. AARC Center projects will create an estimated 4,000 new jobs over the next 4 years. We estimate that for roughly every \$5,000 invested by the AARC Center, one job is created at a plant site.

Also, AARC Center investments add value to the raw materials. On the average, the AARC Center estimates the companies in its portfolio increase the value of the agricultural raw materials they use roughly 10-fold. Some of that value is distributed in the form of wages paid to workers producing the product. Much of the purchasing power of those new paychecks stays in the rural community and circulates in the economy, thereby creating additional economic opportunities.

The AARC Center is a patient investor. In most of the agreements, repayments are not expected to begin before the third year. However, the Center has already received partial repayments from four companies ahead of their negotiated schedule.

The first payback came on March 6, 1995, from the Leahy-Wolf Company of Franklin Park, IL. The company uses crambe or rapeseed as a biodegradable release agent to coat concrete forms used in construction. A second company, Natural Fibers of Ogallala, NE, uses milkweed as filler in pillows and comforters. It also began repaying the AARC Center investment in 1995.

On March 20, 1996, the AARC Center received repayments from two additional companies. BioPlus, Inc., of Ashburn, GA, uses peanut hulls to make the carrier base for crop protection materials and as cat litter. Aquinas Technologies and the National Corn Growers' Association, both of St. Louis, MO, repaid a portion of the AARC Center funds used to market an ethanol-based windshield washer fluid. These repayments go into the AARC Center's revolving fund to support the commercialization of other companies and technologies.

Mr. Chairman, the paybacks that are coming in ahead of schedule are a credit to the investment decisions made by the AARC Center Board. The Members of the Subcommittee are well aware that government price supports for commodity programs would decline under the 1996 Farm Bill. However, their program is committed to commercializing industrial uses and helping to develop new markets for basic commodities. In so doing, the AARC Center can hopefully smooth out the peaks and valleys in commodity prices, thereby helping to keep rural communities vibrant.

Businesses that have been supported by the AARC Center and will be supported by the AARC Center are not only good for the rural economy, but, as an added bonus, they are good for the whole U.S. economy and our environment. These businesses produce environmentally friendly products from renewable, home-grown raw materials instead of using finite and/or polluting sources like petroleum, which are mostly imported. The Farm Bill will require changes to the name, structure and authorities of the Center but the purpose of the Corporation will be identical to the purpose of the Center: to expedite the development and market penetration of industrial and forestry materials and to assist the private sector in bridging the gap between research results and the commercialization of that research.

For activities of the AARC Center in fiscal year 1997, the budget request includes \$6 million of program funds and \$975 thousand for administrative expenses. I think we can assure the Subcommittee that these resources will be well spent in bringing sustainable business opportunity to rural areas.

PREPARED STATEMENT OF MAUREEN KENNEDY

Mr. Chairman and members of the Committee, thank you for this opportunity to discuss with you the accomplishments and goals of the Rural Housing Service.

The Rural Housing Service is a vital part of the Department of Agriculture's Rural Development mission. As defined by the Under Secretary, Rural Development's mission is "to enhance the ability of rural people to create, build and sustain ventures and communities, by building partnerships and investing financial and technical resources in areas of greatest need, through activities of greatest potential."

As part of Rural Development, we affirm and adopt the values that will enable us to accomplish our mission, and we take pride in our contribution to this effort. The Rural Housing Service and its predecessor agency, the Farmers Home Administration, have had longstanding goals to provide credit to families and communities that still don't have effective access to credit because of the isolated nature or small scale of the rural market; and to provide subsidies to those low-income families and communities that could not otherwise afford rent or debt service payments.

Specifically, the Rural Housing Service operates a myriad of housing assistance programs that provide decent, safe and affordable rental and home ownership opportunities to a wide variety of rural Americans. RHS also administers the community facilities direct and guaranteed loan programs which provide subsidized and

unsubsidized loans for essential community facilities such as health care centers, fire stations, municipal buildings and day care centers so that rural communities can provide a decent quality of life and remain competitive in attracting jobs and businesses into their areas. We operate these programs through state and local offices that are being realigned within USDA Service Centers. We deliver our services through an integrated community development approach.

To achieve our mission, accomplish our goals and operate programs as efficiently and cost effectively as possible with limited taxpayer dollars, we have four main strategies:

- Reinvention of our programs through increased use of technology, streamlined regulations, reduced costs and improved customer service;
- Participation in partnerships which extend our limited Federal resources and promote greater involvement by both the public and private sectors in rural community development;
- Development of strong rural communities through strategic investments and integrated rural development; and
- Protection of the taxpayer's investments in rural communities through improved management and ensuring that we spend only what is necessary for proper maintenance of the portfolio.

First I would like to talk about reinvention. We at the Rural Housing Service have taken the President's and Congress's call to reinvent our programs and our approaches seriously, and we have started our efforts with our Section 502 single family direct loan program. Our reinvention efforts are fourfold: improve customer service and choice; use automation to create efficiency; significantly streamline regulations; and reduce the cost of the program and save taxpayers' dollars.

Due to a combination of our actions and reductions in the Treasury interest rate, the subsidy cost of this program between fiscal year 1995 and fiscal year 1996 has been cut by 41 percent. We are serving more homeowners in fiscal year 1996 with significantly less budget authority than we had in fiscal year 1995. We have accomplished this cost savings principally through revising our regulations to come closer to conventional financing practices and requiring borrowers to pay a higher percent of their income—up to 26 percent—and a higher interest rate—up to 6.5 percent—as their income approaches 80 percent of median income.

In addition to this cost savings change, we have improved customer choice and flexibility by eliminating our regulations which required borrowers to purchase a home with specific square footage and amenities requirements. Instead, our borrowers can now purchase a "modest" house as long as it does not exceed the HUD dwelling price limits for the area. This enables the customer to choose those features most important to him or her in the house, while limiting overall taxpayer subsidies.

Finally, our Dedicated Loan Origination and Servicing System initiative (DLOS), is a component of the President's National Performance Review commitments. This effort will centralize the servicing of approximately 800,000 direct loans from our current dispersed field office system of 1,200 offices to a central unit in St. Louis. Using state-of-the-art technology, it will provide better and more consistent customer service to our borrowers. It will reduce portfolio management costs as delinquencies drop, and it will enable us to fulfill the longstanding Congressional mandate to escrow for taxes and insurance.

RHS will initiate DLOS operations in St. Louis, Missouri on October 1, 1996. We expect that it will be fully functional by October 1, 1997. DLOS will save more than \$250 million in taxpayer dollars in the first five years and approximately \$100 million a year thereafter.

As part of our DLOS National Performance Review initiative, we combined the guidance provided in 16 different regulations totaling 290 pages into one consolidated rule which was published in the Federal Register on April 8. Administrative matters will shift to a field handbook, and the remaining text has been completely reengineered to be consistent, simple and clear. RHS estimates the final rule, after DLOS is fully implemented, will cover approximately 30 pages in the Code of Federal Regulations, which represents a 90 percent reduction in regulations from the 290 pages.

In addition to our major Section 502 initiative, we have begun to reinvent our other programs. For example, in our Section 515 multifamily program, we have automated our servicing system and established a loan classification system. This classification system, known as the Multifamily Integrated System (MFIS), will enable us to improve our management and monitoring of the portfolio and reduce costs by improving the focus of our servicing. We have proposed regulatory changes to correct the kinds of program deficiencies that were identified in the 1994 report from the House Appropriations Investigative staff.

Our second strategy is to increase the use of partnerships, which enable us to leverage our limited resources while also building private, non-profit and other public sector participation in local rural development efforts, increasing their likelihood of success. While we have often worked with partners, in many cases we now structure our operations around them.

Of many partnership initiatives, let me mention a few that are particularly exciting:

The Rural Housing Service is a key player among the President's National Home Ownership Strategy. This initiative was organized to increase the rate of home ownership to an all-time high of 67.5 percent and create more than eight million new homeowners by the year 2000. Fifty-six partners signed on to participate in this initiative which includes 100 actions designed to promote and increase home ownership. I should note that after four years of dramatic decline in the rural home ownership rate, 1995 saw a rise of over 1 percent in home ownership in non-metro areas.

In the 502 program, we have encouraged leveraging, which utilizes our direct loan funds in partnership with another lender's funds. We take the second lien on the property, with the private sector lender or housing finance agency in first position. This initiative is currently being pursued in every state. The states are coming up with different approaches, and our RECD flexibility allows them to customize solutions in their states.

For example, the Federation of Appalachian Housing Enterprises (FAHE), a home grown financing intermediary in Kentucky, is working with our state office in Kentucky and seven community based non-profits to provide leveraged loans to low-and very low-income rural residents so that they can achieve the dream of home ownership.

These leveraged loans will be funded through a creative blending of funds from the Federal HOME program, Appalachian Regional Commission funding, the FAHE Home Loan Fund, individual groups' home loan funds, local bank support and of course, USDA Rural Development financing. All of these funding sources will make funds available at below-market interest rates which allows us to stretch our limited dollars. We expect that the partnership funds will provide approximately 30 percent of the needed financing, and Rural Development will provide the remainder, stretching our resources greatly in this high need area.

The Rural Housing Service is also aggressively encouraging our direct Section 502 borrowers to "graduate" to private sector credit, particularly in this low interest rate environment. Many of the borrowers do not have sufficient equity to graduate and qualify for conventional credit. However, they are currently statutorily prohibited from graduating to our guaranteed program.

The President's fiscal year 1997 Budget includes a proposal for \$100 million for graduation of direct borrowers into the guaranteed program, at an appropriated subsidy cost of only \$40,000. The Department will submit a legislative proposal to remove the statutory prohibition. The budget also includes support for \$2.3 billion in the Section 502 guaranteed program, which is a substantial increase over fiscal year 1996.

One of our most successful and long-lived partnerships is found in our mutual self help technical assistance program. The self help program provides grants to non-profit organizations and municipalities to organize and provide technical assistance to groups of families who work cooperatively together to help build their own homes. The sweat equity built up by the borrowers means these families—and the Federal Government—can get more house for less debt. They start out with significant equity, and greater commitment to their neighborhoods.

In addition to organizing, training and supervising the families, the technical assistance providers often bring in additional financial resources.

For example, Tierra del Sol Housing Corporation, a nonprofit self help housing developer in New Mexico, is using \$530,000 of our Section 532 Self Help technical assistance funds and \$3.8 million of our direct 502 single family loan funds to leverage more than \$1.1 million of other financing from banks, including the First Federal Savings Bank and the Mutual Savings Bank of Las Cruces, New Mexico, in conjunction with the Federal Home Loan Bank Board's Affordable Housing program, and loans from the Housing Assistance Council and the Neighborhood Reinvestment Corporation. The self help sweat equity, in conjunction with the RECD low interest financing and the other grants and low interest loans, make home ownership affordable to families that earn an annual income of \$9,200.

We have requested an increase in this cost-effective mutual self help technical assistance program to \$26 million. The demand for this program is extensive, and we will be forced to cut existing grantees if we do not receive an increase in funding.

In the 515 multifamily housing program, we increasingly employ partnerships with state housing finance agencies, CDBG and HOME funds, the private sector and local community organizations. Our Iowa office has very successfully leveraged its 515 allocation. The Agency is a full partner in the state's innovative HART collaboration. For instance, a 24-unit family project is being financed through Rural Development in partnership with funds from the Iowa Department of Economic Development's HOME program, an Iowa Finance Authority Housing Assistance Fund Loan, the Federal Home Loan Bank Affordable Housing Program loan, tax increment financing from the City of North Liberty and Low Income Housing Tax Credits. All told, a \$250,000 Rural Development loan leveraged more than \$900,000.

Finally, I would like to mention the Section 533 housing preservation grant program, which is one of our oldest and most successful partnerships. This program provides critically needed repair and rehabilitation assistance to single family homeowners and multifamily projects. The HPG program leverages over 40 percent of its funds from a broad range of sources such as the Community Development Block Grant program, Weatherization programs and the Administration on Aging.

Our third strategy is to build strong rural communities through strategic investments and integrated rural development. There is a lot of talk these days about local control and integrated rural development. But RHS and its predecessor agency, FmHA, wrote the book on local control and integrated rural development. We've been doing it for years, evidenced by our \$18 billion 502 direct loan portfolio, our \$11 billion and 18,000 unit 515 portfolio, our \$1 billion community facilities portfolio and billions more in loans paid off.

These investments do not stand alone, however. What is unique about the Department's housing and community development programs is their complete integration in our rural community development delivery structure. Communities recognize that affordable housing is a critical element of creating and maintaining economically viable rural communities, but it only works if other development activities are pursued, such as infrastructure development, business development and leadership development.

Our fourth strategy at the Rural Housing Service is to protect the taxpayer's investment in rural communities through improved portfolio management to maximize value and reduce costs. As stated above, we have significant portfolios in each of our programs—\$18 billion in 502 direct, \$11 billion in 515, \$178 million in Farm Labor, \$4.2 billion by the end of this fiscal year in 502 guarantees and \$1 billion in direct and guaranteed community facilities loans. This Administration recognizes its responsibility to act as stewards. DLOS, discussed above, is one example of our efforts to improve the effectiveness of our portfolio management. We are diligently focused on improving our delinquency rates, reducing our inventory properties and reducing foreclosures.

We have instituted a national review system and concentrated technical assistance for those fifteen state offices that have the highest delinquency rates.

Our efforts to improve the management of delinquencies and inventory property help protect the taxpayer's investment once a loan is approved. In our 515 program, we are also ensuring that our tenants' interest is protected while limiting any excess profits or fees that developers can earn from our projects. We have instituted a number of management and administrative reforms to address some of the abuses found in the 515 program.

We are currently working in partnerships with developers, managers and tenants to develop a comprehensive servicing strategy that we hope will take a more common sense, less bureaucratic approach to management of our projects. We have a proposed rule that was published in the Federal Register on January 17, 1996 that addresses many of the concerns about our present point system for location of projects. This rule reforms the point system as much as possible given the current statute. We are proposing legislative reforms for the 515 program.

We know that the vast majority of our 515 projects are responsibly managed. We provide decent and affordable housing to nearly a half-million tenants whose average income is less than \$7,300. Without 515 program housing options, these tenants would join the approximately 2.7 million rural American families who live in substandard housing.

We are committed to ensuring that no opportunities for abuse or excess subsidy are allowed in the 515 program. There is a dire need for decent affordable rental housing in rural America—not just to provide safe and sanitary housing to rural families and elderly individuals—but also to enable America's rural communities to remain competitive and retain and attract businesses. The 515 program is critical to meeting that need. Now I would like to briefly review the additional elements of the President's request in RHS' programs:

SINGLE FAMILY HOUSING

Our reinvented single family 502 direct housing program continues to offer direct 100 percent loans. In many rural communities, traditional rental housing is not available and low-cost owner-occupied housing is substandard. In response, USDA has offered 100 percent financing since the 1950's through its Section 502 single family housing direct loan program. The program allows lower income rural families, who could not otherwise do so, to purchase a modest home and from its inception has been a successful, workable program.

In fiscal year 1995, RHS was provided with a \$1.2 billion program level for Section 502. Because of credit reform and the fact that interest rates increased from the time the budget was submitted and the time the appropriations bill became law, only 21,455 rural families received direct housing loans totaling \$933,937,508. Currently, interest rates are favorable allowing the current budget authority for the 502 program to serve a greater number of applicants this year than last. We are requesting a program level of \$1.3 billion for the direct housing program in fiscal year 1997.

Our single family 502 guaranteed housing program has broadened the spectrum of rural families served through the Agency. The demand for our guaranteed program is growing each year. Guarantees serve moderate-income rural families able to secure private loans only because of the addition of a Federal guarantee. In fiscal year 1995, 16,677 families received guaranteed loans totaling just over \$1 billion. In fiscal year 1996, we estimate that guaranteed loans will total \$1.7 billion. For guarantees in fiscal year 1997, we are requesting a program level of \$2.3 billion.

The combined single family loan programs reach eligible rural residents with incomes ranging from less than 50 percent to 115 percent of area median income. The appropriate amount of subsidy insures that all borrowers pay their fair share and available funding is used to maximum effectiveness.

MULTIFAMILY HOUSING

The rural multi-family housing program finances the construction of rental housing units and provides rental assistance to tenants. These renters are usually elderly, disabled or young families with small children who rely on the 515 program and rental assistance to provide safe and adequate places to live.

We continue to work with Congress to solve problems that are associated with the multi-family housing program. Last year we spent \$73.5 million on deferred maintenance and urgent health and safety needs of projects in our portfolio. With very few exceptions, our portfolio is now in very good shape. This year we estimate spending \$65 million of our \$152 million Section 515 appropriation on rehabilitation, and \$60 million of our requested \$220 million program level in fiscal year 1997.

We are requesting a program level of \$220 million to fund the 515 multi-family housing program in fiscal year 1997.

COMMUNITY FACILITIES

The direct and guaranteed community facilities loan programs serve small towns and villages that need schools, hospitals, fire protection and community centers. Often the communities are too small or too poor to find private financing for these services, and RHS financing is their only recourse.

In fiscal year 1995 our community facilities program received a \$225 million program level for direct funding and \$75 million for guarantees. After the interest rate was determined, the budget authority resulted in a \$176 million program level which funded 272 direct loans. As in our housing programs, the applications for direct loans far exceeded available funds. At the end of the year, \$481 million in unmet requests for funds were on file.

By leveraging funds from other services, more than \$69 million was added to the efforts of the community facilities program. Over 88 percent of all community facilities projects were funded at either the intermediate or poverty interest rate, using Federal subsidies. Thus, the vast majority of community facility funds are used by communities either with great need, limited resources, significant poverty, or in underserved communities with unmet needs.

We are requesting a program level of \$200 million in direct community facilities loans and a program level of \$100 million in guaranteed community facilities loans in fiscal year 1997.

OTHER RURAL HOUSING PROGRAMS

For rural housing repairs, the budget requests \$35 million for direct loans and \$24.9 million for Section 504 grants to elderly participants. The amount requested

for mutual and self-help housing grants in fiscal year 1997 is \$26 million. The request for rural fire protection grants is \$2 million and \$11 million is requested for rural housing preservation grants. For rental assistance, the budget requests \$540,900,000 for renewal, servicing, new construction and debt forgiveness rental assistance units. The request for housing for domestic farm labor is \$16.5 million for loans and \$10 million for grants. Site development loans and self-help housing loans are both requested at the \$600,000 level and \$75 million is requested for loans for sale of inventory property.

The total budget authority cost of all rural housing programs requested in the Budget is \$861.8 million, a decrease of about \$32 million from fiscal year 1996.

PREPARED STATEMENT OF DAYTON J. WATKINS

Mr. Chairman and members of the Committee, I am pleased to present the Administration's fiscal year 1997 budget for the Rural Business-Cooperative Service (RBS).

The mission of RBS is to enhance the quality of life for all rural Americans by providing leadership in building competitive businesses and cooperatives that can prosper in the global marketplace. RBS accomplishes this mission by investing its financial resources and technical assistance in businesses, cooperatives, and communities, and by building partnerships that leverage public, private, and cooperative resources to stimulate rural economic activity.

The goals and objectives are to: (1) promote a dynamic business environment in rural America; (2) work in partnership with public and private organizations to empower rural residents to pursue economic development opportunities through networking, leveraging loan and grant funds, and through access to the Information Superhighway; (3) assist in the development of strategic, sustainable, and environmentally sensitive economic growth that meets the expressed needs of rural communities; (4) ensure Agency benefits are available to all segments of rural America, with emphasis on those most in need; (5) provide a high standard of customer service; (6) expand the number of program benefits and recipients; and, (7) assist in the development of high-technology industries.

We focus our program resources on areas that have experienced pervasive poverty, out-migration of population, or sudden, severe structural changes in their economies. We empower rural residents and develop economic opportunities by enhancing the existing public and private credit structures through our loan and grant, cooperative development, technical assistance, and technology development programs.

Despite decades of investments in infrastructure and business development, rural America continues to face many significant challenges. Some of the challenges, like the persistence of poverty in major parts of the South and in Appalachia, have been with us for a long time. Others, such as the loss of jobs and businesses from rural economies, are due to changes in the structure of rural economic bases and the globalization of competition.

Increasingly, new problems—problems that center on the role rural communities will play in a future that relies less and less on raw materials as economic assets—that dominate the rural policy agenda. Today we are more concerned about creating jobs in remote places and in developing new industrial uses for traditional commodities. We are concerned about building economic linkages between rural businesses and the urban and global marketplaces to which they must sell. We are concerned about building economic bases on regional scales to achieve economies in production that will make rural competitiveness feasible. And we are concerned about finding solutions that pool the assets of public and private organizations to achieve holistic and forward-looking approaches to economic development.

RBS has made a concerted effort to improve our customer service. The guaranteed Business and Industry (B&I) loan program can serve as an excellent example of how RBS is reducing unnecessary paperwork and giving our field staff more authority and flexibility to manage the program.

In an effort to streamline and update the B&I program, RBS has recently proposed to replace the existing regulations for the program. The revised regulations are shorter, simpler, clearer, and more logically organized. The volume of material in the new regulations is about one-half that of the current regulations. The proposed program changes will shift some responsibility for loan documentation and analysis from the Government to the lenders, make the program more responsive to the needs of lenders and businesses, and provide for smoother and faster processing of applications.

The revised B&I regulations were published as a proposed rule in the Federal Register on February 2, 1996, with a 60-day comment period. We anticipate final publication soon.

RBS believes the streamlining of the regulations will increase the use of the B&I program and enable the Agency to deliver a larger program. The proposed changes will also meet the objectives of the National Performance Review regarding improved customer service, less regulation and streamlined Agency operations. The ultimate benefit to be realized is increased lending activity resulting in the expansion of business opportunities and the creation of more jobs in rural areas, particularly in those areas that have experienced historical economic distress.

Last fall, RBS announced the beginning of the Automated B&I Application. Working in partnership with financial institutions, RBS developed an automated application procedure for B&I lenders. Ten states were selected to participate in the user validation demonstration program for testing this new product. The new system will alleviate some of the concerns expressed by our customers regarding requests for repetitive information and cumbersome and complicated regulations, forms and agreements. The automated application software will be released for nationwide implementation at the same time the Business and Industry streamlined guaranteed regulation is released.

RBS has also advanced an extensive outreach initiative to lenders, lenders' organizations, and entrepreneurs and business owners to apprise them of the availability and benefits of the program. In addition, an RBS B&I video has been developed and distributed for use in outreach activities within the states.

RBS began holding a series of "Business Financing Forums" with financial institutions around the country. These forums are designed to increase our relationship with the lending community and to increase their involvement in our B&I program. It is also designed to encourage rural business owners to use the B&I program.

Last year RBS proposed a major rewriting of the IRP regulations. Like the B&I changes, the new regulations will clarify and revise procedures and requirements regarding a variety of issues. The revised regulations will clarify the roles of the Government and intermediaries, make the program more responsive to the needs of intermediaries and ultimate recipients, and facilitate expansion of the program.

Under the Departmental Reorganization Plan, the Rural Economic Development Zero-Interest Loan and Grant Program, formerly administered by the Rural Electrification Administration, was transferred to RBS. These programs provide RBS with another vital economic development tool which can be used with our other business programs to deliver economic development resources in rural communities.

In the past, applications for these programs were received and processed by the National Office staff. The Secretary advocates that our services will be delivered at the level where the customers reside. Therefore, we are delegating the administration of this program to our state offices. This will provide for more timely, user-friendly, and effective delivery of these programs while enhancing the opportunities for rural electric and telephone cooperatives.

Now I'd like to briefly address our program funding requests.

BUSINESS AND INDUSTRY LOANS

The guaranteed Business and Industry (B&I) loan program provides RBS with an excellent opportunity to work together with commercial lending institutions, Farmer MAC, Farm Credit System banks, SBA, and other lending institutions to develop a dynamic business environment in rural America. Through the B&I program, we provide business loan guarantees to lenders financing private business expansions and/or new start-up companies in rural communities. The program guarantees all types of businesses except those engaged in agricultural production with the exception of aquaculture, commercial nurseries, forestry, livestock and poultry processing (except for working capital), and the growing of mushrooms or hydroponics. These companies create and save jobs, upgrade the infrastructure, and improve the lives of rural residents.

Last year, 327 new or expanding businesses were funded for a total of \$423,595,760, using a budget authority of \$4,000,000. This resulted in 22,375 jobs being created and retained at a budget authority cost of about \$178 per job.

An employee-owned business located in Omak, Washington, part of the Pacific Northwest, was the recipient of a \$4.9 million B&I guaranteed loan last year. The saw mill and plywood manufacturer has an annual payroll of \$30 million. Its annual revenue is \$80 million and is anticipated to increase to \$100 million in 5 years.

Due to the economic downturn in the timber industry, the business was forced to restructure its debt. The B&I loan was used to restructure the business debt and provide working capital. The U.S. Bank of Washington participated in the venture

by providing a \$10 million line of credit for inventory and working capital. The employees sacrificed \$28 million in stock to ensure the future success of the business. This means \$38 million of other credit or debt of the company were leveraged against the \$4.9 million B&I guaranteed loan.

This B&I guarantee saved 476 jobs. These jobs represent approximately 20 percent of the work force in the community. Other jobs such as truck drivers, loggers, and raw material suppliers were also saved since there are no other saw mills for over 100 miles in that part of the state.

DIRECT BUSINESS AND INDUSTRY LOANS

Many rural areas lack competitive capital market, which may lead to inadequate sources of financial assistance, especially for new businesses, as evidenced by a study completed in November 1994 by the American Bankers Association. Recent Business and Industry loan guarantees shows there are extensive areas of the country where, despite outreach efforts by the Agency, the need for financial assistance for business development is not being met. This is especially true in areas with long term persistent poverty, such as the Mississippi Delta, areas experiencing fundamental structural changes in their economic base, such as the Pacific Northwest, and areas of long term population decline, most notably the Central Plains State. As evidenced by the establishment of Enterprise Zones and Empowerment Communities, there is a need to assist rural residents who have not been served by the traditional sources of credit provided by commercial lenders, including government backed guaranteed loans.

The President's 1997 Budget includes \$50 million for a direct loan program to fill gaps that cannot be met through guaranteed loans.

INTERMEDIARY RELENDING LOANS

The Intermediary Relending Program (IRP) invests Federal funds to leverage local funds in support of rural businesses and jobs. Loans go to non-profit intermediaries who in turn relend them to rural businesses to improve business, industry, community facilities, jobs, and economic diversity of rural areas. The program makes investment capital available to entrepreneurs who cannot obtain financing from conventional sources.

Data shows that every \$1.00 loaned to an ultimate recipient results in \$3.76 in leveraged funds. Accordingly, the \$85 million lent to intermediaries in fiscal year 1995 could leverage more than \$319.6 million in other funding. In fiscal year 1996 to date, \$12.52 million has been authorized to fund 16 loans which will result in more than \$47 million of other funds being leveraged.

On the average, each \$100,000 of IRP money loaned by the intermediary provides employment opportunities for approximately 20-25 people. Last year RBS made 81 loans to intermediaries totaling \$85.153 million. It is projected that these loans, once they are repaid (an average of 3.4 times during the life of the loan), will create or save between 54,000 to 72,000 jobs through the term of the loan. At the end of fiscal year 1995, we had an application pipeline of 97 applications for a total of \$125.8 million. Conversely, in fiscal year 1996 we have \$37.544 million to lend which will create and save 25,530 jobs.

A \$750,000 Intermediary Relending Program loan to Knox County Community Development Corporation (KCCDC) was approved on September 26, 1995, and closed on October 16, 1995. KCCDC is headquartered in Edina, Missouri, and provides services to Knox County, a sparsely populated county in the northeastern part of Missouri that has been steadily losing population for decades. KCCDC contributed \$120,000 in matching funds to create a total revolving loan fund of \$870,000. By March 1, 1996, KCCDC had approved loans totaling \$750,000 from the revolving fund to eight new and existing local businesses. A total of 52 new jobs is attributed to this financial assistance and the loss of 96 existing jobs has been prevented. It was expected that the remaining \$120,000 would be committed by the end of March, bringing the jobs total even higher.

RURAL BUSINESS ENTERPRISE GRANTS

The Rural Business Enterprise Grant (RBEG) Program finances and facilitates the development of small and emerging private business enterprises. This program can be used for economic development projects which will help to sustain rural communities. These grants are used to finance and facilitate development of small and emerging businesses in rural areas with a population of less than 50,000. They may be used for (1) the acquisition and development of land, easements, and rights-of-ways; (2) construction, conversion, enlargement repairs of buildings, plants, machin-

ery, equipment, access streets, roads, parking areas, utilities and pollution control, and abatement facilities; (3) revolving loan funds; and (4) technical assistance.

Last year, 229 grants for \$47.5 million were made, approximately 3,192 businesses were assisted resulting in the potential for 10,600 jobs being created and 5,200 jobs saved. Of this amount, \$2 million was provided for rural public nonprofit T.V. demonstration projects in Vermont, Maine and North Dakota.

The City of San Luis, Arizona, is using the RBEG funds of \$464,200 along with \$150,000 contributed by Halls Custom Construction, the developer of the affected residential area, to build a bridge that will enable residents of San Luis to safely connect with the business district and the local elementary school. For years residents of San Luis have had to inch precariously over a narrow pipe spanning the Yuma Main Canal to get from their homes to the local grocery store and business district. School children were attracted to the perilous balancing act as a short cut to the local elementary school. Besides the obvious safety risks, the lack of adequate access from the residential area to the business district also threatened to close down 25 of the existing businesses in town that employ an estimated 75 local residents.

The City of San Luis is one of 30 rural Empowerment Communities named by President Clinton in December of 1994. The City of San Luis received a \$464,200 grant from the Empowerment Zone/Enterprise Community (EZ/EC) portion of the RBEG program to build a bridge across the canal.

RURAL TECHNOLOGY AND COOPERATIVE DEVELOPMENT GRANTS

The Rural Technology and Cooperative Development (RTCDG) grant program helped promote the development and commercialization of new services, products, and processes in rural areas. The Federal Agriculture Improvement and Reform Act of 1996 renamed this program as the Rural Cooperative Development grant program.

The RTCDG program provided grants to public bodies and nonprofit organizations to establish and operate centers for rural technology or cooperative development, with their primary purpose being the improvement of economic conditions in rural areas. These improvements will be accomplished by promoting the development (through technological innovation, cooperative development, and adaptation of existing technology) and commercialization of new services and products that can be produced or provided in rural areas; new processes that can be utilized in the production of products in rural areas; and new enterprises or cooperatives that can add value to on-farm production through processing or marketing. In fiscal year 1995, 12 RTCDG grants totaling \$1.75 million were awarded.

Benefiting from the use of RTCDG funding were Tribal communities in Montana, considered persistently poor. This system will help implement, enhance, and encourage new product development in these rural areas where it was not deemed possible before.

One-point three million dollars in RTCDG funding is proposed to be used for the Appropriate Technology Transfer for Rural Areas (ATTRA) program which encourages agricultural producers to adopt sustainable agricultural practices which allow them to maintain or improve profits, produce high quality food, and reduce adverse impacts to the environment. ATTRA functions as an information and technical assistance center staffed with sustainable agricultural specialists accessible nationally through a toll-free telephone number.

RURAL ECONOMIC DEVELOPMENT LOANS AND GRANTS

The Rural Economic Development Loan and Grant Program promotes rural economic development and job creation projects. These zero-interest rate loans made to Rural Utilities Service electric and telephone borrowers are re-lent to provide start-up financing, project feasibility studies, and other expenses associated with creating business enterprises in rural communities. Under these programs last year we provided funds to 102 electric and telephone cooperatives, which is anticipated to provide zero-interest loans to more than 150 businesses totaling \$32,347,512 while creating over 5,500 jobs.

A plastics company was able to create 15 new jobs in the Gettysburg, Pennsylvania area assisted by a \$400,000 zero-interest loan from an electric cooperative to finance the \$650,000 plant expansion. The funds were used to purchase four new injection molding machines. The project will provide high paying jobs in a rural section of Pennsylvania.

We believe this program provides a well-proven method of supporting economic development based on the individual needs of each rural community.

COOPERATIVE SERVICES

Cooperative Services (CS) devotes its efforts to promoting the understanding and use of the cooperative form of business as a viable option for rural residents. As government support programs are changed and encouragement is given to more market driven policies, farm operators, ranchers and other rural residents are realizing that they need more effective forms of group action in the market place to represent their economic interest.

Cooperative Services conducts studies, alone or in conjunction with other Federal or State institutions, to provide farmers with information on economic, financial, organizational, legal, and social aspects of cooperative activity. Technical advice assists farmer cooperatives in the development and operation of viable profitable organizations serving the nation's family farmers. Educational assistance provides farmers and other rural residents with an understanding of the proper use and application of the cooperative tool.

The CS program is one of the only places in the Federal Government that acquires and disseminates information pertaining to cooperation, and serves as the focal point of national activity supporting use of agricultural cooperatives. The purpose is to help farmers help themselves by providing the assistance necessary to support and improve existing cooperatives and to help farmers organize new cooperatives to this end.

Fresh fruit and vegetable growers in northern Ohio have marketed products through the market in Toledo for several years. But changes in city government programs and revitalization of the market area necessitated a new marketing approach. Growers sought assistance from Cooperative Services in structuring a cooperative to operate in the new environment. Through the new organization, Farmer's Market Association, the indoor market is now a reality and all 153 stalls are fully occupied for the coming season.

BUDGET REQUEST

I would like to point at a few specifics of the budget proposal. For loans for rural business and industry, we are requesting \$800,000,000. Included in this program amount is \$50,000,000 for direct loans which will be targeted to extremely underserved areas. The Budget includes \$80,000,000 for direct loans to intermediary lenders who make loans available for development projects and retain the proceeds in a revolving fund to multiply the credit resources available in rural areas. There is \$14,000,000 requested for the rural economic development loan program. For grants for rural business enterprises, the budget request includes \$45,000,000. The Budget requests \$1,700,000 for rural technology and cooperative development grants and \$1,300,000 for appropriate technology transfer. Support for rural economic development grants is requested at the program level of \$20,000,000, although these grants are made from ahead of schedule loans repayments and do not require appropriated budget authority.

Because these activities are mostly carried out through loan programs, the total program level of \$968,000,000 would require a budget authority appropriation of only \$101,073,000. This delivers \$9.58 of program benefit for every dollar invested by the taxpayer.

Mr. Chairman, the Rural Business-Cooperative Service is proud of its achievements. We intend to continue serving the needs and enhancing the quality of life for residents in rural America. I'd be pleased to answer any questions you or the other members may have.

BIOGRAPHICAL SKETCHES

JILL LONG THOMPSON

Jill Long Thompson was raised on a grain and dairy farm in Whitley County, Indiana, where milking cows, feeding hogs, making hay, and participating in 4-H were all part of her formative years; the experience directly influenced her involvement in agriculture. With her family, Jill Long Thompson weathered the economic hardships experienced by the farm community during the 1980's, returning to Whitley County to help her parents successfully work through a financial reorganization in 1987.

Jill Long Thompson's dedication to public service began in 1983 after having won a seat on the Valparaiso City Council. She served on the Council until 1987 and ran as a candidate for the U.S. Senate in 1986. Jill Long Thompson was a college

business professor and co-manager of her family's farm when, on March 28, 1989, she won a special election to represent Indiana's Fourth Congressional District.

Upon her arrival in Congress, Jill Long Thompson successfully sought to represent her largely rural district with an appointment to the House Agriculture Committee. She served on that Committee's panels on Environment, Credit, and Rural Development—of which she was named vice chair in February 1994; General Farm Commodities; and Livestock, Dairy and Poultry.

In January 1993, Jill Long Thompson was elected as Chair of the Congressional Rural Caucus. Through her strong leadership and a cohesive bipartisan agenda, Jill Long Thompson more than doubled—to over 100 Members of Congress—the membership of the Caucus. As a result of her hard work, she became a recognized champion of rural issues on Capitol Hill and focused Congressional attention on many legislative fronts to the unique challenges faced by rural Americans.

Jill Long Thompson also served on the House Committee on Veterans Affairs and as a member of the Task Force on Government Waste which investigated dozens of Federal Government agencies in an effort to identify wasteful and inefficient uses of taxpayers money.

Jill Long Thompson most recently served as a Fellow at the Institute of Politics in the John F. Kennedy School of Government at Harvard University. She earned an M.B.A. (1978) and a Ph.D. (1984) in business from Indiana University, and a B.S. from Valparaiso University (1974). Prior to her election to Congress, Jill Long Thompson was an Assistant Professor of Business Administration at Valparaiso University and an Adjunct Professor at Indiana University-Purdue University at Fort Wayne. In addition, she was a Lecturer at Indiana University in Bloomington.

Thompson, 43, is a lifelong Hoosier and currently resides with her husband, Don Thompson, at a farm near Argos, Indiana.

W. BRUCE CRAIN

W. Bruce Crain was appointed the Acting Director of the Alternative Agricultural Research and Commercialization (AARC) Center in 1994. The Center is an independent entity within USDA with policy direction provided by a 9-member Board of Directors, 8 of whom are from the private sector. Mr. Crain was named permanent director by the Board in December 1994. As Director, Mr. Crain is responsible for day-to-day management of the AARC Center. The AARC Center's mission is to expand industrial (non-food, non-feed) uses of agricultural based materials. The four major functions are to: be a facilitator; encourage private-public partnerships; fund promising projects; and serve as an information clearing house.

Prior to his current appointment, Mr. Crain was Deputy Administrator of Management and Policy Support for the Rural Electrification Administration, a credit agency of the U.S. Department of Agriculture. In that capacity, he worked on finance-related projects and issues effecting capital formation in rural areas. Also, he implemented the reorganization of the Small Community and Rural Development's functions which, in addition to REA, included the Farmers Home Administration and the Rural Development Administration. The reorganization was called for as part of the Secretary of Agriculture's plan to streamline the department.

A native of Columbia, MS, Mr. Crain came to Washington, DC, in October 1991 as Vice President of Legislative Affairs for the National Council of Community Bankers. It merged in 1992 with the League of Savings Institutions to form the Savings and Community Bankers of America. He worked with Congress on housing and financial issues and as the association's liaison with Fannie Mae and Freddie Mac, Federal housing lenders.

He was Director of Industry Relations for the Federal Home Loan Bank of Dallas from 1990–91 and President of the Mississippi League of Savings Institutions, Jackson, MS, from 1986–90.

Mr. Crain received a bachelor's degree in public administration from the University of Mississippi in 1982. He is a graduate of the U.S. Chamber of Commerce Institute for Organization Management, University of Notre Dame South Bend, IN, and attended the Graduate School of Savings Institutions' Management, University of Texas-Austin.

He and his wife, the former Patricia Horne of Brandon, MS, live in Alexandria, VA, and are the parents of two sons, Cameron, 2 years old, and Conor, 2 months old.

EMPOWERMENT ZONES/ENTERPRISE COMMUNITIES

Senator COCHRAN. You and I talked a couple of times on the telephone about the rural empowerment zones, the rural areas that have been identified for special attention for loans, grants, or other benefits to try to help create jobs in those unusually depressed areas of our country.

Senator Bumpers and I for some time have been working together under his leadership and with others in the Lower Mississippi River Valley. The Delta Commission was created because of his initiative, and I was pleased to be a cosponsor of that legislation here in the Senate with him.

I was worried at the time we talked that there was a lot of bureaucratic gridlock and brought that to your attention because nothing was happening, or at least those who thought they were going to be getting the benefits of these programs weren't getting any approvals of their applications for assistance.

There were all kinds of rumors going around about who was making the decision, who was calling the shots. Was it the State director's office, was it your office, was it somebody else? Were the politicians so involved that you had to have a political and other kind of background to be sure you were eligible to be considered? Were there preferences or biases in the program?

It worried me, and I don't know what the answers are yet. I don't know whether there has been an aggressive approach to seeing that this program is being used in the way that it was designed by the Congress and with the administration's support.

What is the status of this program, if I have described it in a way that refreshes your memory about our conversations, and have things happened? Are there jobs being created?

Can you tell us anything about whether we ought to fund that program or not fund it, or change direction?

Ms. LONG THOMPSON. Well, I believe very strongly that the program is successful and is becoming more successful the longer that we have had an opportunity to administer it. I think that there are a number of reasons that it works, and you and I, in our conversation on the phone, I think I expressed a concern that I have in general about making sure that we administer programs cost effectively, that we get the program dollars out to the communities that need the money, and that we do that as cost effectively and expeditiously as possible.

It takes a little while for a program to get up and running, and this is a new Presidential initiative. I'm going to turn this over to Dayton Watkins in a minute to talk about some of the specifics, but the reason the program is working is that it uses a different approach which places the initiative at the local level. This is a very, very important component. In order for a region to be designated an empowerment zone or a community to be designated an enterprise community, it was important for the community leaders to come to an agreement on a 10-year strategic plan for their community. That is a much better approach to economic development than we, in the Department of Agriculture or in any other department in the Federal Government, telling a community what its 10-year

plan ought to be and how it ought to achieve its goals and objectives.

It is a program or an initiative that is working. I believe it is also working because it is interagency, interdepartmental.

We do have a number of success stories. I have visited some of our empowerment zones and enterprise communities, as well as have met with some of the individuals involved in the individual EZ's and EC's, and have had an opportunity to hear what's going well and what we might want to work on to make it run more smoothly.

But, in general, the consensus is that this is working very well for the individual communities, and even some of those that did not get a designation, they are moving forward on their own at a faster pace because they went through the process of putting together that strategic plan. And, in doing that, they brought together people from different backgrounds, who had different thoughts and ideas on economic growth and development. They put aside their differences to work for the common goal of their community.

But my sense is that it is working very well, that it did take a while to get off the ground because it is a new initiative and it is a new approach. But now that we are up and running, I believe it is working very, very well, and I think it is a model for the future in terms of programs across the Federal Government.

Let me turn it over to Dayton Watkins, who can tell you about the memorandums of agreement and such that have been completed and where some of the individual EZ's and EC's are in terms of their progress and what we have done with them.

Senator COCHRAN. Thank you.

Mr. Watkins, would you pull the microphone closer to you so that we can all hear.

Mr. WATKINS. Mr. Chairman, I just want to add only a few additional remarks. The Under Secretary clearly articulated the progress that we've made to date. In the rural empowerment zones/enterprise communities we have signed all of the memoranda of agreement in the 33 designated communities. What that means is, having signed that agreement, we are now in a partnership relationship with those communities. The Federal Government and the USDA, being the lead on the rural part of the Presidential initiative, are working very closely together, but not just Agriculture. Every other Federal agency is working in partnership with us in the Empowerment Zones/Enterprise Communities Program.

Communities are also working very closely together. One of the requirements of the program is that community representatives and their leaders, including businesses and financial institutions, had to create a partnership to participate in this program. We are seeing tremendous results, I think. Let me give just a couple of examples.

We earmarked in the rural development program funds a certain percent of the funds to go specifically to the empowerment zones/enterprise communities. For instance, in the Business and Industry Loan Program, we earmarked \$16 million to be used specifically in those designated communities for the expansion and creation of businesses. To date, we have used \$2.5 million. However, in terms of preapplications, we have more than \$16 million on hand now. So

that tells us that we have at least \$16 million in preapplications that are waiting to be processed by the entrepreneur and the financial institution to create economic activity and expand the job and employment base within those zones.

We also earmarked \$8.3 million in the Rural Business Enterprise Grant Program.

Senator COCHRAN. That's what?

Mr. WATKINS. It's \$8.3 million.

Senator COCHRAN. \$8.3 million, in what program?

Mr. WATKINS. The Rural Business Enterprise Grant Program. To date, we have obligated \$3.1 million.

In terms of the Water and Waste Disposal Loan and Grant Program, we earmarked \$16 million for grant and we have obligated \$2.8.

The process of obligating funds is quite lengthy. We expect that the funds that have been earmarked are going to be used. The demand on those funds is just phenomenal.

There are a couple of businesses that we have already funded in the Mississippi Mid-Delta empowerment zones. That \$2.5 million went to Fresh Water Farms, Inc., and that is a catfish processing facility.

Senator COCHRAN. Where is that? Do you know?

Mr. WATKINS. No; in terms of the actual location?

Senator COCHRAN. Yes; what town or county?

Mr. WATKINS. No; I don't. I'm sorry, I don't have that.

Senator COCHRAN. So \$2.5 million went to that one facility?

Mr. WATKINS. Yes, sir; \$2.5 million.

Senator COCHRAN. And that was the total amount of the B&I? Is that a B&I obligation?

Mr. WATKINS. Yes, sir.

Senator COCHRAN. So that is the only project that has been funded at this time out of the entire earmark for B&I?

Mr. WATKINS. Yes, sir; out of our 1996 earmark. But as I have indicated, we have a pipeline of applications totaling \$3.9 million. We have one in South Carolina, and that application is under review now. We have one in West Virginia for \$3 million that is under review.

The process is that an entrepreneur finds out about the program, they want to expand their business, they go to their local lender and they inquire about obtaining financing. At that point, they prepare a preliminary application which they submit it to us. We review it to determine whether or not that business would be eligible under our program regulations. We communicate back to the entrepreneur and the bank that it is eligible, then they move to preparing the formal application.

We do it that way because we don't think that an entrepreneur should have to prepare a complete application and then be told by us that the business wouldn't be eligible under our guidelines. And so, it helps us and it also helps the entrepreneur as well.

Senator COCHRAN. Thank you. Senator Bumpers.

Senator BUMPERS. Mr. Watkins, let me pursue this further with us because, as Senator Cochran has pointed out, one of the most persistent and pervasive areas of poverty in the United States is in the lower Mississippi River Delta area.

I don't mind telling you that it has been the most frustrating thing of my entire public life. And I might also speak for the President. The President, when he was Governor of our State, he and I worked endless hours and days trying to improve the plight of the people who are really parts of seven States on both sides of the Mississippi River.

I've made this speech so many times that I get tired of hearing it. But I think about the Mississippi River and it is the transportation jewel of America. You would think that industry would just be happy to get there, particularly where they have multimodal systems, interstates, and railroads, and airlines, and so on. The river is a magnificent addition, an additional method of transportation. But it just doesn't happen that way.

We have ports. I assisted then Congressman Alexander, who, with me, worked for a long time to get Helena a slackwater harbor. But I don't want to pursue that any further except to say it has just been the most intractable problem. And I am not smart enough, frankly, to know how you deal with it.

When I was Governor, I used to make what with we call Arkansas Industrial Development Corp. a standing order. I had a sort of standing order with them, sort of secret because I didn't want the rest of the State to know it, but I insisted that they take every prospect over to eastern and southeastern Arkansas and do everything they could to entice them over there. But that didn't work. You know, people have their own ideas about where they want to live, where they think their workers want to live.

So that area continues to lose population. Politically, Senator Cochran will be happy to hear this. The northwest corner of my State, which is all Republican, is growing like a weed, and the Democratic constituents in the southeast are moving out. That is one of the reasons we have become really a two-party State.

But completely aside from that, the poverty there, if you look at it, is light-years better than it was, even when I was elected Governor 26 years ago. But it still lacks a lot.

Now these centers you are talking about, describe them. Do you have nine centers? How many centers do you have? You mentioned that a moment ago, at least I thought you did.

Is this a technical assistance center or something?

Mr. WATKINS. No, Senator. The President designated 33 empowerment zones/enterprise communities in December 1994. Three of those designated communities were empowerment zones and 30 were enterprise communities.

Senator BUMPERS. How many empowerment zones?

Mr. WATKINS. Three were empowerment zones.

Senator BUMPERS. Wasn't that a pilot program, that we were going to establish those to see how well they worked, or not?

Mr. WATKINS. I don't know whether it was a pilot program, Senator. I think at the time the administration identified enough funding to do both the urban and the rural Empowerment Zones and Enterprise Community Program. At that time, I'm not sure that there was a clear indication of the possibility of additional funding to expand it.

It is clearly a new way of doing community and economic development. The Clinton administration asked communities to develop

strategic plans of what they thought they needed and what they thought their communities needed to become economically sustainable and to enable residents in those communities to begin to participate in the economic mainstream of America.

Those strategic plans came in and were evaluated. They came in from more than 296 rural communities. Clearly, there wasn't enough funding to cover the pervasive poverty in rural America, but for those that did get the designation, the communities are working together. Both the businesses, the nonprofits, the charitable organizations, and the people worked together creating sustainability and attracting businesses.

We encourage businesses to move into the empowerment zone communities. We encourage entrepreneurs who are looking for a viable business opportunity, those who have a business concept or business idea, to access our programs because we can finance those kinds of programs.

BUSINESS AND INDUSTRY LOANS

Senator BUMPERS. Mr. Watkins, let me ask you about the catfish processing plant in Senator Cochran's State. How much money did you invest in that?

Mr. WATKINS. We guaranteed a \$2.5 million loan.

Senator BUMPERS. Is it a bank loan?

Mr. WATKINS. Yes, sir.

Senator BUMPERS. And you guaranteed it?

Mr. WATKINS. Yes; as you know, the B&I program is a Government guarantee program. The business person goes to the bank. The bank puts up the cash for the transaction and we guarantee the loan.

Senator BUMPERS. Now your budget authority is \$124 million and your program level is \$1 billion, is that correct, for 1997?

Mr. WATKINS. For 1997 or 1996?

Senator BUMPERS. What is your program level for 1997?

Mr. WATKINS. Our appropriated request?

Senator BUMPERS. It's close to \$1 billion, isn't it?

Mr. WATKINS. Yes, sir; it's \$750 million for guaranteed business and industry loans.

Senator BUMPERS. That's \$750 million?

Mr. WATKINS. Yes, sir.

Senator BUMPERS. And your budget is \$124 million, your budget authority?

Mr. WATKINS. The budget authority for the B&I loan program is about \$7 million. So we leverage \$7 million, because of credit reform, up to \$750 million in guaranty authority.

Senator BUMPERS. \$7 million, is that what you're saying? You leveraged \$7 million into \$750 million?

Mr. WATKINS. Yes, sir.

Senator BUMPERS. The chairman said that is better than the loaves and the fishes. [Laughter.]

Ms. LONG THOMPSON. We agree. [Laughter.]

RURAL BUSINESS-COOPERATIVE SERVICE STAFF

Senator BUMPERS. How many employees are in this Rural Business-Cooperative Service?

Ms. LONG THOMPSON. I have that number and I can provide it for the record. I have it here, if I can just find it in my notes. But it can be provided for the record.

Senator BUMPERS. I would like to have that, Madam Secretary.

Ms. LONG THOMPSON. I'll find that for you in just a moment.

WATER AND WASTE DISPOSAL PROGRAM

Senator BUMPERS. Mr. Beyer, let me just make a comment. I don't have any Earth-shaking questions here. I just want to say that your division is the one that I laud and love better than any part of the Department of Agriculture. It concerns wastewater, water/sewer grants, and loans.

The demands on that fund are staggering, and we have people calling us all the time. In your statement here, which I read, you say that the 1997 request would supply, apparently, potable drinking water or sewer grants to 2 million people? Is that correct? Let me come back to that. Maybe I can find that here and read it to you.

You said that the combination of the loan and grant programs will provide safe, affordable drinking water to an estimated 782,000 rural households and an estimated 2.2 million people. Is that correct?

Mr. BEYER. Senator Bumpers, Mr. Chairman, that is our estimate of what we think we can reach with this fiscal year 1997 budget.

We are talking about now only the unserved but we're talking about modernizing antiquated, aging infrastructure, treatment facilities. It is really a health hazard that we are dealing with here. The funds are used both for serving the unserved and also for improving, modernizing treatment facilities, so that we can help communities in rural areas provide safe, clean drinking water.

Senator BUMPERS. You state that you are under tremendous pressure in 1996 because the amount of money available to you is less than 1995, is that correct?

Mr. BEYER. That's correct.

Senator BUMPERS. I'm assuming that when you say you're going to provide safe drinking water to 2.2 million people, you're talking about 1997 with the funds that you are requesting?

Mr. BEYER. Yes, sir; that's correct, with the President's funding proposal.

Senator BUMPERS. What percentage of the applications that you thought were fairly legitimate were you able to fill in 1995?

Mr. BEYER. Senator Bumpers, let me just say that we have an annual carryover of projects that—

Senator BUMPERS. Will take up virtually all of that year's funding?

Mr. BEYER. Well, it's up to about \$3.1 billion in loan requests and \$1.3 billion in grant requests.

Senator BUMPERS. That you carry over?

Mr. BEYER. Yes, sir; that we are carrying over. It is a huge, huge backlog and it is a huge looming problem in rural America that we are dealing with here.

Senator BUMPERS. How many of those would you fund if you had the money? Are you talking about legitimate applications that you

would fund if you had the money that meet your criteria for poverty level and all that sort of thing?

Mr. BEYER. Yes, sir; I am talking about legitimate projects that are laying there, waiting for us to deal with them.

Ms. LONG THOMPSON. And if I could interject, not only would they receive funding if we had the dollars, but there are many communities that do not submit applications because they know there is a 3-year backlog. And so, there are many more out there that could very legitimately submit an application and be eligible and receive funding.

So the \$3.1 billion that the Administrator is referring to is actually an under representation of what the need is.

WATER AND WASTE DISPOSAL INTEREST RATES

Senator BUMPERS. On these loans, the interest rate right now is running around 5 percent, is that correct?

Mr. BEYER. Right. We have three interest rates, basically. One of them is based on poverty income, the other one is an intermediate rate, and the last rate is, basically, a Treasury rate. So we have three basic categories that we are working with.

What we do is balance the ability to pay. We try to use grant funds with loans to balance the ability to pay in most of these projects, frankly. As you recognize, this Federal agency, this mission area is the Government's point, a Federal service providing these infrastructure programs into rural America. The need grows as the infrastructure ages. So we have somewhat of a dilemma here.

We certainly appreciate this committee's concern and help. We, hopefully, are going to gain on this and, with your approval, hopefully we will get more funds going into fiscal year 1997.

Senator BUMPERS. Well, if it were left up to me, if I were king—and I certainly ought to be. [Laughter.]

I'd give you about five times as much money as you are getting in this program, and I could find it easily from far less worthy projects.

Mr. Chairman, let me just close this out by being sure I understand the poop sheet here on the subsidy level and so on.

This year, 1996, we gave you \$123 million with which, and the water and waste disposal loan, that is, the direct loan program, you were to leverage that to \$547 million. Is that correct?

Mr. BEYER. That's correct.

Senator BUMPERS. Now this year, we are giving you about one-half that amount and you are going to leverage \$250 million more. That has something to do with the interest rate, is that correct?

Mr. BEYER. That is correct.

Senator BUMPERS. Say for the record what that is.

Mr. BEYER. It has everything to do with the interest rate. The interest rates, based on this budget, are projected to go down some, and that's why we can get more loan dollars with less subsidy dollars.

October 1 is the time when this is reconciled. So if the interest rates are up, higher than these projections, then, of course, we are going to have less loan dollars, and that is a condition, a potential condition, that is looming.

Senator BUMPERS. What is your projected interest rate, Mr. Beyer?

Mr. BEYER. It's 5.5 percent for the cost of money.

Senator BUMPERS. What is it right now?

Mr. BEYER. About 6.4 percent.

Senator BUMPERS. So you're anticipating a 0.9-percent drop in interest rates?

Mr. BEYER. Yes, sir; that's correct. This is the budget folks' and OMB's projection on this.

Senator BUMPERS. Are you going to be able to leverage that \$547 million this year, in 1996, with that \$123 million we gave you for this year?

Mr. BEYER. Oh, yes; that's committed. Yes, sir; we are.

Senator BUMPERS. So with the \$123 million, you are going to be able to fund, or at least loan, the program level loans will be \$547 million, at least, or more?

Mr. BEYER. That's correct. You know, we're trying to leverage these scarce Federal dollars as best we can.

Senator BUMPERS. Well, I'm going to tell you, Mr. Beyer, that I admire your optimism. But I don't think you are going to meet an \$800 million level with \$69 million, one-half of what you had last year, to do \$250 million less. That doesn't make much sense to me.

But you're saying if interest rates go to 5.5 percent for 1997, you will be able to leverage \$800 million in programs?

Mr. BEYER. That's correct.

Senator BUMPERS. Good luck.

Mr. BEYER. And if the interest rates stay level, then we are not going to be able to do it. That is the other side of it, and it is a real, looming issue.

Senator BUMPERS. As I say, I admire your optimism. I don't share it, but I hope you're right and I'm wrong.

RURAL BUSINESS-COOPERATIVE SERVICE STAFFING

Ms. LONG THOMPSON. Senator, I do have the answer to your question regarding the number of employees.

Senator BUMPERS. Yes?

Ms. LONG THOMPSON. It is 382 for this fiscal year and it will be dropping to 369.

Senator BUMPERS. How many, again, Ms. Long Thompson?

Ms. LONG THOMPSON. It's 382.

Senator BUMPERS. That's 382. OK.

I may submit some additional questions, Mr. Watkins, on this program. I don't know very much about this program and I am curious about it.

Mr. WATKINS. Senator, we will be glad to respond to any of your questions and also to provide a briefing to you on it, if you wish.

STREAMLINING OF B&I REGULATIONS

Senator BUMPERS. You've got some new guidelines you've just written, haven't you?

Mr. WATKINS. Yes, sir; we published those on February 2, 1996. We are streamlining the program, as the President wanted us to do. We have taken 50 percent of the regulations out. We are mak-

ing them more user friendly to the financial community and to the businesses that are interested in accessing it.

We are currently reviewing some 80 comments that we have gotten on it and we expect to publish the final rules in the next month or so.

Senator BUMPERS. Thank you, Mr. Chairman.

OBLIGATIONS IN EZ/EC'S

Senator COCHRAN. Madam Secretary, one of the problems I think with this rural enterprise empowerment initiative is the time it has taken to get the program implemented, the regulations written.

If I'm not mistaken, there were 1995 funds appropriated and then rescinded because the regulations didn't get written. Then, in 1996, from what Mr. Watkins has told us, you have about \$40.3 million in program funding earmarked for the program. And your budget notes show that you're going to obligate \$80 million in fiscal year 1997 for the program, if I read all of this right.

Am I right on all of these three points, so far?

Ms. LONG THOMPSON. You're always right, Mr. Chairman. [Laughter.]

Senator COCHRAN. Now you and I know better than that. [Laughter.]

Ms. LONG THOMPSON. The money that you referred to as not spent was actually reallocated to other States. It was not rescinded.

Senator COCHRAN. The problem remains that of the total amount of program dollars in this current fiscal year, \$40.3 million, only \$8.4 million has been obligated. Is that correct?

Here's how I get the addition. \$2.5 million has been used in the B&I Program; \$3.1 million has been used in the Rural Business Enterprise Grant Program; and \$2.8 million has been obligated for use in the Water Grant Program. That's what Mr. Watkins said.

Ms. LONG THOMPSON. Yes; that is correct.

Mr. WATKINS. Yes.

Senator COCHRAN. I tried to add all of that up in my head and I think it comes to \$8.4 million.

Ms. LONG THOMPSON. But, Mr. Chairman, the usage is increasing and the rate is increasing as we move along.

Senator COCHRAN. So you think you're going to use the \$40.3 million this fiscal year? We shouldn't go back in and revise this bill that we're about to approve and use that money somewhere else?

Ms. LONG THOMPSON. I believe we're going to use it.

I would also like to submit for the record some of the accomplishments of the EZ/EC so that the documentation would be on the record, if that would be agreeable.

Senator COCHRAN. Why don't you just submit that for the record.

Ms. LONG THOMPSON. I'll do that.

[CLERK'S NOTE.—The information referred to is found in an answer to a question later in the hearing testimony.]

Senator COCHRAN. These facts speak for themselves. Here we are, more than half-way through this fiscal year, and only one guaranteed business and industry loan has been approved by this agency. It makes you wonder what everybody's doing.

What is everybody doing—going around negotiating these plans, strategies, agreements, and interagency this and that? That is all

that has happened, just a lot of busy work done by the employees of this agency to justify their existence. But what would really justify their existence is making some loans, guaranteeing some loans, getting some new businesses started, expanding some old businesses, and getting something done, making something happen out there. That's why people are frustrated.

They hear about all of this. Everybody goes down there and visits, makes speeches, and I tell them we've got this great news. Here is an enterprise community that has been designated in Mississippi, here is an empowerment zone. Everybody thanks me. Thank you, Senator, for helping us get this approved. And then nothing ever happens.

That's the whole thing, and people are aggravated. They are confused. I'm aggravated, I'm confused. I don't know why we want to add money if we are going to just continue doing what we're doing. But if we can see some real progress being made economically in these areas, like Senator Bumpers was talking about, the devastation down there is still just as plain as can be in terms of economic dislocations. That's what they called it.

When I first came to Washington, I heard about economic dislocations. I thought what on Earth is that. That means you're broke. Well, we've got a lot of people who are just flat broke down there. They don't have a job; they don't have any money, and they haven't had any hope until they heard about some of these programs and some of these new business opportunities.

So I hope that we can all rededicate ourselves to doing whatever is necessary to get this program moving and producing some jobs.

Ms. LONG THOMPSON. Mr. Chairman, it's not unusual for much of the funding to actually get spent in the last 6 months of the fiscal year because of when the applications come in and so forth. We do expect that we will be using most, if not all, of those funds. But I am in absolute agreement with you that it's very important that we administer these programs cost effectively and expeditiously because the purpose is to get the funds and the assistance there to help the communities.

We would be very glad to work with you to do whatever we can to improve. I would like to think that since I came on board about 6 months ago, that we are moving at a little faster pace and I hope that that continues.

Administrator Beyer has some information. Actually, I think the funding number that you may have received regarding water and waste was not correct, and he would like to provide the correct amount for the record.

WATER AND WASTE DISPOSAL LOANS AND GRANTS IN EZ/EC'S

Mr. BEYER. Mr. Chairman, we have no problem using the funding authorities that we have in the EZ/EC program. We did it in 1995. In fact, we used some pooling funds to fund some of these projects, not only the EZ/EC, but we are targeting money to champion communities. We call them champion communities, the ones that didn't win the big prize. They are communities that have gotten themselves together and they want to do something, and they are all excited about it. We want to help them as well.

In 1996, we have 19 projects under review already that will take up just about all of our allocation for the EZ/EC project. In addition to that, we are targeting to the best of our ability to some of these poverty areas. We are working in the Mississippi Delta. We're focusing on the Mississippi Delta and some of the poverty areas of this country. We are making some progress in that area and I am optimistic about it.

Senator COCHRAN. Well, you know, there is the Rural Utilities Assistance Program. Is that what we were talking about? Is the EZ/EC part of that, or are these two different programs?

Ms. LONG THOMPSON. They are two separate ones.

Senator COCHRAN. He is talking about the water and sewer grant and loan programs that we have all historically understood.

Mr. BEYER. Yes, sir.

Senator COCHRAN. We've never had enough money for that.

Mr. BEYER. I'm talking about the infrastructure programs that are a part of this EZ/EC. We're targeting these infrastructure programs to these communities.

Senator COCHRAN. So, of the \$16 million that had been set aside, as Mr. Watkins had described it, only \$2.8 million has been obligated. He was talking about the special targeted program to these especially disadvantaged communities, I thought. He was not talking about the overall program that you're talking about.

Mr. BEYER. No; I'm talking about the infrastructure. We have funded 19 infrastructure projects in EZ/EC communities already.

Senator COCHRAN. OK. So the \$2.8 million is not correct, then?

Mr. BEYER. No.

Senator COCHRAN. So what is correct?

Mr. BEYER. In fiscal year 1995, we had \$14.4 million in loans and \$16.8 million in grants.

Senator COCHRAN. Well, now, he's talking about 1996, I thought.

Mr. BEYER. In 1996, we have already funded \$11 million in grants and \$7 million in loans, round figures.

Senator COCHRAN. How much is earmarked for those special ones?

Mr. BEYER. \$16 million in grants and \$12 million in loans, round figures. I'm rounding them off.

Senator COCHRAN. OK. Thank you for that clarification.

RURAL COMMUNITY ADVANCEMENT PROGRAM

On another subject, then, the budget includes the Rural Performance Partnership Program that consolidates 14 rural development programs into one funding stream. There is a provision of the farm bill that was recently passed and signed by the President that includes something called the Rural Community Advancement Program.

My question is, Are these compatible? Are they the same? Are you going to submit a budget amendment which conforms the Rural Performance Partnership Program with the authorization for the Rural Community Advancement Program? If not, how does the Rural Performance Partnership Program differ from the Rural Community Advancement Program and should we fund both? If so, at what levels?

Ms. LONG THOMPSON. We will be submitting a budget amendment, but they are compatible and the Rural Community Advancement Program is very similar to the Rural Performance Partnership Initiative that was introduced by the President. The Rural Community Advancement Program is a more flexible version of the Rural Performance Partnership Initiative. But they would accomplish the same thing. The RCAP is what we are intending to administer as it was passed in the farm bill.

Senator COCHRAN. Thank you very much.

BUDGET REQUEST FOR RURAL UTILITY PROGRAMS

Mr. Beyer, in the request for rural utility programs under your jurisdiction, the budget proposes an electric loan program level of \$1.125 million for fiscal year 1997. The subsidy associated with the program level is \$39.6 million.

These figures represent an increase of \$210 million in loans, combined with a decrease of \$40 million in subsidies.

Can you give us a status report on the needs of rural electric borrowers and is this request adequate to meet the needs of borrowers in fiscal year 1997?

Mr. BEYER. Yes, sir; thank you, Mr. Chairman.

The budget authority associated with the loan dollars is the same problem that Senator Bumpers talked about in regard to the water program. It's a projected decline in interest rates going into the beginning of fiscal year 1997. I personally think there is a dilemma in that.

Right now, Senator, we are estimating a backlog in the electric program of about \$500 million in funds based on fiscal year 1996 loan dollars available.

Senator COCHRAN. Will all of 1996 loan dollars be used?

Mr. BEYER. Yes; to the best of my knowledge. Yes.

Senator COCHRAN. You talked about a carryover.

Mr. BEYER. Yes, sir; I'm talking about a carryover. I'm talking about a \$500,000 carryover, basically in hardship and municipal rate line item programs.

Senator COCHRAN. Did you have any trouble with OMB?

Mr. BEYER. No, Mr. Chairman; we're doing fine with OMB. You know, I personally have a little problem with these interest projections. I am concerned, as I'm sure you folks are going to be, particularly in this subcommittee, that when we get down to October 1, the interest rate is not going to be as low as we thought it was going to be; therefore, the budget authority is not going to produce these loan dollars. That is going to be a dilemma for all of us.

Senator COCHRAN. That's why we have smart people like Senator Bumpers on this committee, to help us figure out how to avoid that.

Mr. BEYER. Yes, sir.

Senator BUMPERS. I'd give up my Senate seat to be head of OMB. I'd rather be head of OMB than President. [Laughter.]

Senator COCHRAN. You wouldn't get to play as much golf. [Laughter.]

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION

The Alternative Agriculture Research and Commercialization Corporation is in the budget. Mr. Crain, that comes under your jurisdiction, I know. It includes \$6.975 million for the center for this next year. The fiscal year 1996 budget proposed a new \$25 million loan program for AARC as part of the so-called greenbox proposal the administration made.

The farm bill included several changes to the authorizing legislation for this new corporation.

What will this mean, in your estimation, for the program? Will the changes in the farm bill change this program so much that you will resubmit or amend your budget request? Let's deal with that one, first, and then I've got a followup.

Mr. CRAIN. Mr. Chairman, I don't think that will affect our budget request at all.

What the farm bill does is make us a wholly owned corporation inside USDA. It makes some minor changes in the makeup of our board of directors. Currently our nine-member board includes eight members from the private sector. We will be adding two under secretaries, including Ms. Long Thompson and Mr. Stauber from the rural education and economics division of USDA and one other member.

But, as far as the functioning of the program, it will not have any impact at all, with one exception. One thing was thrown in there that is a significant incentive for these companies we are funding to grow, and that is that there is language in there that gives preferential treatment in the Government procurement process to these AARC funded companies.

What that means is that a lot of these companies that we have invested in in rural areas now will have a market, and that market meaning the Federal Government, if the Government has to buy products similar to those. These products are environmentally friendly and they are all rural-based. We think this is going to be an excellent way to jump start these companies. It's not the end-all/cure-all, but making the Government buy these is a jump start for them.

Senator COCHRAN. Did you receive any repayments from borrowers and do you plan to or expect any in the next fiscal year?

Mr. CRAIN. I'm glad you mentioned that, Mr. Chairman. We, today, have received repayments, the starting of repayments from five separate companies. We have in our revolving fund right now about \$50,000 in repayments, and that's just the start.

The other thing I want to mention is these repayments have all started early. Most of the repayment agreements that we have with these companies do not require the repayments to start until the third, fourth, or fifth year. Every one of these repayments has come in early and that is a credit to this board of directors and their expertise.

Senator COCHRAN. That is good news. I can congratulate you on the way you are administering and working this program. I think it is a good program and it has been helpful in a lot of obvious instances.

Do you think we ought to continue to fund it?

Mr. CRAIN. Without a doubt. [Laughter.]

On a personal note, here, it is very gratifying to see a lot of these small communities that come to us, similar to what Senator Bumpers pointed out, that really are on their last legs. There are not a lot of economic opportunities. But I have had companies in our native Mississippi and in Arkansas recently come to me and say, you know, we've got all of these crops out there, we've got wheat, rice, cotton, and a lot of these materials out there. Are there ways we can add value to them to make them viable?

That is what we are able to do. We are able to go to a rice farmer in Arkansas and work with him in adding value to that rice straw to make particle board, or go to the Mississippi Delta and offer them an alternative crop, like kenaf, which we are very excited about. About one-tenth of our portfolio is in kenaf.

Mr. Chairman, we have our brochure printed on Mississippi grown kenaf.

Senator COCHRAN. To let you know, the last time I was at Mississippi State University, they gave me a baseball cap made from kenaf and something else mixed together. So it has diverse possibilities, not just in paper or cardboard-type products.

Mr. CRAIN. We currently fund three different companies that are using kenaf as a raw material and are based in Mississippi. We've got a company making an environmentally friendly potting medium out of it.

Senator BUMPERS. You're going to be refunded, I can tell you that. [Laughter.]

Mr. CRAIN. Well, that was the whole idea, Senator Bumpers. [Laughter.]

But they are making an environmentally friendly potting medium out of the core fiber. We've got KP Products, which is a company in New Mexico, using Mississippi kenaf to make paper. Another company is making a grass mat line for environmentally friendly mat, where you just roll out the mat which has the seeds sown in them. It is for erosion protection and also for landscaping. There are several others that we also have a minor interest in through some readjustment of our contracts with some of the companies.

Senator COCHRAN. It is good to have that report. The committee will benefit from that. We appreciate the good work you are doing.

DISTANCE LEARNING AND TELEMEDICINE

Mr. Beyer, I have another question for you and it is in connection with the Distance Learning and Telemedicine Program.

I understand what this program is. If you can, tell us about it. This was just an idea a few years ago. Now it is beginning to be a program that you are administering. You had some experience in it.

Do you think funding for the next fiscal year is justified on the basis of use and need out there?

Mr. BEYER. Mr. Chairman, the Distance Learning and Telemedicine Program is 4 years old this fiscal year, and it is growing by leaps and bounds. Last year we had about 286 applications for the \$7.5 million in grant funds, under the authority. We were only able to award 30 projects.

As you know, we are living in a world of electronic commerce. This program is so critical to rural America today. It erases time and space. It doesn't matter where you live anymore. You simply have to have a quality infrastructure and then you can participate in the economy of the world, really.

In addition to that, it is a critical program from the standpoint of providing quality health care in rural America. We have numerous examples of funding a medical center that is providing services in surrounding counties for far distances. They are coming back to us now to expand it.

There is no question about the need for the program and there is no question about our ability to utilize the funding. The fiscal year 1997 President's budget calls for \$20 million in grants and \$125 million in a new loan program that was authorized by Congress in the farm bill. So we are, in fact, beginning, starting to write regulations to blend the new loan program in with the grant dollars to stretch the Federal dollar again.

So it is a very critical program from an electronic/commerce standpoint, from an education standpoint, and from a medical/quality of medical services in rural America.

Senator COCHRAN. Thank you. I am going to defer to Senator Bumpers for additional questions right now. Senator Bumpers.

APPROPRIATE TECHNOLOGY TRANSFER

Senator BUMPERS. Mr. Chairman, I thank you very much. I just wanted to discuss one thing that goes on in my State with Mr. Watkins, the so-called appropriate technology transfer program that is at the University of Arkansas, as you know.

Happily, that has been transferred over to this subcommittee. But last year, they had 25,000 requests for information on sustainable farming. Just 2 weeks ago, we dedicated a new \$5 million Alternative Pest Control Center at the University of Arkansas. They have been on sort of the cutting edge of these biological methods of controlling pests. It sort of fits to some extent with the ATTRA program there, where we try to teach people about sustainable agriculture—for example, no-till and what the likely impact of various herbicides, pesticides, and so on is.

The number of requests this past year has doubled from farmers all over the country calling them for information about sustaining their crops, usually with less use of herbicides and pesticides, and we alternative know that is the direction we have to move in.

Their funding has been at \$1.3 million essentially for a very long time. I don't have any quarrel with that. But what I do want to ask is this. We might get a little bit more money for that. But I am just wondering what does your office do to notify other agricultural agencies, especially the Cooperative Extension Service, about the availability of ATTRA services? I mean, do you have any posted notices in agricultural offices around the country about the services that ATTRA can render?

Mr. WATKINS. Senator Bumpers, the program was just transferred to us in fiscal year 1996.

Senator BUMPERS. I know.

Mr. WATKINS. We took it over from the Department of the Interior, I believe.

We are now in the process of establishing our relationship. We have prepared the cooperative agreement. We have not, however, moved forward to notify other agricultural agencies of the availability of ATTRA, but we are in the process of developing our internet home page. Within that home page, we are listing all of the programs that are administered through the Rural Business-Cooperative Service.

ATTRA will be administered through our cooperative services operation and we intend to notify everyone through the automated process.

Senator BUMPERS. Let me just say that I think that the service they performed, you know, for a long time that was a piece of pork that Jamie Whitten and I thought about every year. [Laughter.]

You know, he was upset because they had moved from Memphis to the University of Arkansas campus, and I understood that. We all have pride in certain projects and so on.

But I am convinced that ATTRA is now moving really into the area because of the environmental pressures. They are moving into an area where they are really becoming much more important than they used to be.

I think we are missing a real bet if we don't take advantage of ATTRA to trying people like the Cooperative Extension Service and others who are dealing hands on with farmers every day so they can get the benefit.

Now ATTRA is going on-line this year on the internet, and that will be helpful. But, you know, maybe that will help some of the various farm service agencies in the communities, but it doesn't mean much to farmers as probably not too many of them have computers or are tied into the internet and so on.

All I am saying is the services they offer are becoming extremely important. I would hope that you would consider the possibility of training programs so that the field officers, as I say, who deal with farmers every day, would know not just what ATTRA offers, but would be able to communicate that to the farmers themselves without their having to call ATTRA.

Right now, virtually all of their services are by phone. Now 25,000 phone calls in a year is a lot from people who want to know what service is available, you know, what should I do. Should I plant this, should I plant that, should I use this chemical, that herbicide? What is the current information on it and so on?

Mr. Chairman, I thank you very much for allowing me to interrupt matters here.

Senator COCHRAN. Thank you, Senator. You did not interrupt at all.

RADIO FREQUENCIES FOR INTERNET ACCESS

But back to Mr. Beyer. I had another question. I read in the paper this morning that the Federal Communications Commission is going to make available certain radio frequencies for internet access at no cost to those who would like to access that on their computers, I guess, or on their networks.

I also understand that internet access is available through telephone lines if you have the right computer hardware available. Given those facts, your statement suggests that the Distance

Learning and Telemedicine Program will or has provided rural residents with internet access.

I wonder, how are you providing this, through loans to buy computer hardware? Or in what way are you doing this? There are private companies out there providing this access all over America now. So why are you doing it, too?

Mr. BEYER. The agency is not providing that service, Mr. Chairman.

Senator COCHRAN. Maybe we misread it, then.

Mr. BEYER. Well, maybe we miswrote it, Mr. Chairman. I don't want to leave the wrong impression.

Senator COCHRAN. Here you talk about the local and regional networks. "The Distance Learning and Telemedicine Grant Program has been a resounding success and has begun to make a difference in rural communities." Then you talk about some of the things you have already mentioned. Then the last sentence on that page says, "Also, as a result of these local and regional networks, over 18,000 rural residents will receive internet access."

Mr. BEYER. That refers to the availability of internet access from telecommunication providers, Mr. Chairman.

Senator COCHRAN. So you are not providing the access?

Mr. BEYER. No; we are not providing it. We are providing assistance in funding infrastructure that is critical to the access and, of course, the funding from the distance learning and telemedicine project enhances that ability. We are helping in an indirect way, but the agency is definitely not providing any internet service.

MUTUAL AND SELF-HELP PROGRAM

Senator COCHRAN. I have some other questions. Let me ask this about housing. I don't want Mr. Shadburn to spend all this time sitting here and not get a chance to show off, to let us know how much he knows about these things. [Laughter.]

Section 523 is the Mutual and Self-Help Housing Program. The budget includes \$26 million for grants for this program. It represents an increase of \$13.3 million over the 1996 level.

That got my attention because what we are probably going to see, if we are lucky, is a freeze, probably an allocation that is about the same as last year's level. It is great to be able to request a \$2 billion increase, as your budget does for all these programs. I think that's right. Sounds great. You can send out a news release knowing that that is probably not going to end up being funded because of the realities of the budget and the history this year, although we did pretty well in allocations and we hope to do well next year.

Anyway, some critics of this program suggest that the nature of the program results in lower quality houses which, in turn, make it harder for the Government when they are financed with section 502 loans. Others say there are private groups that can perform the same function, such as Habitat for Humanity and others. Is there a need for this program?

Mr. SHADBURN. Mr. Chairman, certainly there is. In the self-help housing program, I think what it does in rural communities is it allows dignity, for one thing, because these communities have individuals who are in a position to come together and provide their

sweat equity. They are allowed to have opportunities for housing that otherwise they would not have the downpayment money for.

I'll give you two examples. I was in two communities where individuals that were farm laborers had come together and were using their sweat equity to build their own homes with the aid of the technical assistance self-help provider.

What that did is it gave them training in a field other than farm labor. What they were going to do after that training was to form their own company with this contractor and provide the labor for housing construction.

The other thing in the self-help program allows individuals such as one lady that I met who had been living in rental housing for 8 years and had raised two children in a rental unit. She was able to provide through their sweat equity the downpayment to own their own home. This is the American dream.

So the self-help housing program is needed. The quality of our homes is good because we have the oversight with quality technical assistance providers that make sure the quality of the construction is A-1.

I might add that the self-help housing loans that we have show some of the lowest delinquencies that we have.

Senator COCHRAN. That's good. That's a strong argument and a very persuasive argument in support of the program, I think.

Ms. LONG THOMPSON. Mr. Chairman.

Senator COCHRAN. Madam Secretary.

Ms. LONG THOMPSON. Thank you. I have visited some of our self-help housing projects and have been really impressed with the quality of the work. I think it is because of the pride of ownership that goes with it. It is really second to none.

They put the effort in and learn the skill. It is close to perfect, the workmanship that I have seen.

In one of the cases where the homes had just been completed, the families had virtually no money for a down payment. But by the time they had put their own efforts into building the homes, they had on average \$11,000 of equity in their homes. These are modest priced homes but are just very successful.

RURAL RENTAL HOUSING PROGRAM

Senator COCHRAN. What about the 515 program? The program has not been reauthorized in the past 2 years, and, since it has not, the 1996 appropriation for the program was restricted for use only for rehabilitation of existing housing.

Has the administration proposed legislation to reauthorize the program? Do you support reauthorization?

What is the current need for rehabilitation funding? What level would be appropriate?

Mr. SHADBURN. Mr. Chairman, the 515 program was just reauthorized. So we will be able to continue with the program.

In terms of what our needs are, in terms of our deferred maintenance and repair needs, right now we are looking at around \$65 million in usage in the repair/rehab/deferred maintenance. We are prioritizing those needs for each State to focus on the repair/rehab needs immediately. We are getting applications in as we speak to

meet those repair/rehab/deferred maintenance needs. We have prioritized those.

SUBSIDY FOR RURAL HOUSING PROGRAMS

Senator COCHRAN. OK. The President's budget for loan and grant programs for rural housing and community development provides for substantial increases in program levels with equal or lower requests for the corresponding subsidy appropriation.

These are presumably based on the economic assumptions included in the President's budget. Mr. Beyer was talking about interest rates and was guessing at where it is going to be. This may be a rosy scenario that we hear often discussed.

Do you anticipate requesting additional funds if CBO does not concur in these subsidy calculations or the economic assumptions?

Mr. SHADBURN. Based on our budget assumptions right now, we will not submit an amended request.

Senator COCHRAN. Is it possible that the administration wants to propose substantial increases for these programs in the election year, relying on these rosy economic assumptions or is this just cynicism on our part?

Ms. LONG THOMPSON. It would be cynicism on your part, Mr. Chairman. [Laughter.]

Senator COCHRAN. That seems like a good place to stop. [Laughter.]

Ms. LONG THOMPSON. Mr. Chairman, I do have some figures that you had requested for the record regarding the Empowerment Zone Enterprise Community.

Since December 1994, when the EZ/EC was initiated, the Department of Agriculture has obligated roughly \$100 million to local communities and close to 3,000 jobs have been created, associated with that money. In 1995 and thus far in 1996 we have obligated \$6.4 million in the mid-delta empowerment zone and there is an additional \$1.3 million in process for 1996. I will submit for the record tables reflecting funding decisions for 1995 and 1996 for each EZ and EC.

[The information follows:]

EARMARKED FUNDS
FY 1995

		EARMARKED REQUESTS	B & I	IRP	RECD PROGRAM AREAS			W & W D	TOTAL BY ENTITY
NO.	ST.				RBEQ	CF			
		ENTITY NAME							
# 20	AR	MISSISSIPPI COUNTY EC	500,000			500,000			
# 20	AR	MISSISSIPPI COUNTY EC	46,700					46,700	
# 20	AR	MISSISSIPPI COUNTY EC	250,000		250,000				796,700
# 26	AL	CHAMBERS COUNTY EC							
# 35	CA	IMPERIAL							
# 45	MS	MID-DELTA EZ	250,000			250,000			
# 45	MS	MID-DELTA EZ	1,000,000		1,000,000				
# 45	MS	MID-DELTA EZ	500,000		500,000				2,525,000
# 45	MS	MID-DELTA EZ	775,000					775,000	
# 74	NC	HALIFAX/EDGECOMBE/WILSON	400,000			400,000			
# 74	NC	HALIFAX/EDGECOMBE/WILSON	4,724,000					4,724,000	5,124,000
# 84	AR	EASTERN ARKANSAS	500,000			500,000			
# 84	AR	EASTERN ARKANSAS	750,000		750,000				
# 84	AR	EASTERN ARKANSAS	258,000					258,000	
# 84	AR	EASTERN ARKANSAS	316,586		316,586				1,824,586
# 85	OR	JOSEPHINE COUNTY EC							
# 89	FL	JACKSON, FLORIDA EC	750,000				750,000		750,000
# 97	SC	WILLIAMSBURG-LAKE CITY EC	131,000				131,000		131,000
# 107	TX	RIO GRANDE VALLEY EZ	1,377,500			1,377,500			
# 107	TX	RIO GRANDE VALLEY EZ	976,500					976,500	2,354,000
# 113	AL	GREENE & SUMTER COUNTIES	100,000		100,000				
# 113	AL	GREENE & SUMTER COUNTIES	2,120,000					2,120,000	2,220,000
# 114	MO	CITY OF EAST PRAIRIE	300,000			300,000			300,000
# 115	LA	NORTHEAST LOUISIANA DELTA EC							
# 116	WA	LOWER YAKIMA COUNTY RURAL EC							
# 120	SD	BEADLE/SPINK SOUTH DAKOTA EC	1,000,000		1,000,000				1,000,000
# 133	WV	CENTRAL APPALACHIA	1,426,000					1,426,000	1,426,000
# 140	MS	NORTH DELTA MISSISSIPPI EC	500,000		500,000				
# 140	MS	NORTH DELTA MISSISSIPPI EC	1,915,800		1,915,800				2,415,800

#147	TN	FAYETTE/HAYWOOD EC	82,500			82,500				
#147	TN	FAYETTE/HAYWOOD EC	500,000			500,000				
#147	TN	FAYETTE/HAYWOOD EC	475,000			475,000				
#147	TN	FAYETTE/HAYWOOD EC	600,000			600,000				
#147	TN	FAYETTE/HAYWOOD EC	2,220,000						2,220,000	3,877,600
#149	OH	GREATER PORTSMOUTH	1,000,000			1,000,000				
#149	OH	GREATER PORTSMOUTH	80,000							1,080,000
#155	PA	CITY OF LOCK HAVEN	75,000							75,000
#159	KY	KENTUCKY HIGHLANDS EZ	750,000						750,000	
#159	KY	KENTUCKY HIGHLANDS EZ	1,705,000						1,705,000	
#159	KY	KENTUCKY HIGHLANDS EZ	1,942,500						1,942,500	
#159	KY	KENTUCKY HIGHLANDS EZ	2,100,000					2,100,000		6,497,500
#162	MI	LAKE COUNTY	500,000			500,000				500,000
#168	AZ	ARIZONA BORDER REGION	100,000							
#168	AZ	ARIZONA BORDER REGION	464,200					100,000		
#168	AZ	ARIZONA BORDER REGION	358,000					464,200		
#168	AZ	ARIZONA BORDER REGION	160,000					358,000		
#168	AZ	ARIZONA BORDER REGION	500,000					160,000		
#168	AZ	ARIZONA BORDER REGION	857,500					500,000		
#186	TN	SCOTT MCCREARY AREA EC	1,450,000					857,500		2,439,700
#186	TN	SCOTT MCCREARY AREA EC	2,600,000					1,450,000		
#186	TN	SCOTT MCCREARY AREA EC	920,000						2,600,000	
#186	TN	SCOTT MCCREARY AREA EC	2,000,000						920,000	
#186	TN	SCOTT MCCREARY AREA EC	2,000,000			2,000,000			2,000,000	
#186	TN	SCOTT MCCREARY AREA EC	764,000						764,000	9,734,000
#187	WV	McDOWELL COUNTY EC								
#189	NC	ROBESON COUNTY EC	7,200,000						7,200,000	7,200,000
#211	GA	CRISP/DOOLY								
#215	LA	MACON RIDGE	300,000					300,000		
#215	LA	MACON RIDGE	2,000,000			2,000,000				2,300,000
#216	GA	CENTRAL SAVANNAH RIVER AREA								
#218	VA	ACCOMACK-NORTHAMPTON	500,000					500,000		500,000
#234	OK	SOUTHEAST OKLAHOMA	300,000			300,000				
#234	OK	SOUTHEAST OKLAHOMA	733,800						733,800	1,033,800
		TOTALS	56,104,686	1,915,800	10,216,586	8,972,300	3,838,500	31,161,500		56,104,686

EARMARKED FUNDS AND SSBG DRAWDOWNS

AS OF 04/30/96

FY 1996

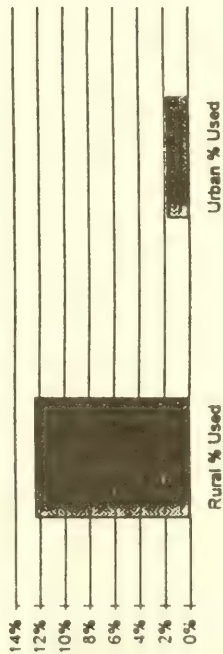
NUMBER	STATE	ENTITY NAME	FUNDING REQUESTS	B & I	IRP	RREG	CF	W & W D LOAN	W & W D GRANT	TOTAL BY ENTITY	SSBG DRAWDOWN
# 26	AL	CHAMBERS COUNTY EC									
# 113	AL	GREENE & SUMTER COUNTIES RURAL EC	626,000					X		626,000	
# 20	AR	MISSISSIPPI COUNTY EC									60,021
# 84	AR	EASTERN ARKANSAS	850,000							850,000	61,201
# 168	AZ	ARIZONA BORDER REGION	175,000			X					
# 168	AZ	ARIZONA BORDER REGION	199,855								
# 168	AZ	ARIZONA BORDER REGION	350,000								
# 168	AZ	ARIZONA BORDER REGION	825,500								
# 168	AZ	ARIZONA BORDER REGION	197,800								
# 168	AZ	ARIZONA BORDER REGION	195,000			X				1,943,155	
# 35	CA	IMPERIAL	200,000			X					987,422
# 35	CA	IMPERIAL	182,500			X				382,500	
# 71	CA	CITY OF WATSONVILLE	300,000			X					125,000
# 71	CA	CITY OF WATSONVILLE	500,000			X				800,000	
# 89	FL	JACKSON, FLORIDA EC									81,870
# 211	GA	CRISP/DODOLY	1,941,300					X		1,941,300	83,651
# 216	GA	CENTRAL SAVANNAH RIVER AREA EC	759,600						686,400		66,503
# 216	GA	CENTRAL SAVANNAH RIVER AREA EC	341,500			341,500				1,101,100	4,010,512
# 159	KY	KENTUCKY HIGHLANDS EZ						X			
# 159	KY	KENTUCKY HIGHLANDS EZ	1,408,000					X			357,534
# 115	LA	NORTHEAST LOUISIANA DELTA EC	33,000			X					
# 115	LA	NORTHEAST LOUISIANA DELTA EC	300,000			X					
# 115	LA	NORTHEAST LOUISIANA DELTA EC	2,000,000		X					3,333,000	
# 115	LA	NORTHEAST LOUISIANA DELTA EC	1,000,000		X						
# 115	LA	NORTHEAST LOUISIANA DELTA EC	133,750			X					
# 115	LA	NORTHEAST LOUISIANA DELTA EC	190,350			X					0
# 215	LA	MACON RIDGE	506,000					X		506,000	571,789
# 162	MI	LAKE COUNTY	709,000						524,000		
# 162	MI	LAKE COUNTY	2,000,000			2,000,000				2,709,000	
# 114	MO	CITY OF EAST PRAIRIE	600,900			X				600,900	258,574

SSBG Drawdowns

HHS DATA		RURAL SSBG DRAWDOWNS AS OF:				4/26/96	
NAME	STATE	Cumulative	Thru Feb. '96	Mar '96		Comments	
Kentucky Highlands EZ	KY	\$3,926,409	\$3,902,359	\$24,050			
Mid-Delta EZ	MS	\$135,399	\$56,000	\$79,399			
Rio Grande Valley EZ	TX	\$2,100,294	\$2,059,142	\$41,152			
Chambers County EC	AL	\$0	\$0	\$0		State is offering technical assistance	
Greene & Sumter Co.s Rural EC	AL	\$0	\$0	\$0		Finance Agrmt signed by Gov 15 Apr 96. \$368,200 requested.	
East Central Arkansas EC	AR	\$58,043	\$0	\$58,043			
Mississippi County EC	AR	\$53,997	\$0	\$53,997			
Arizona Border Region EC	AZ	\$0	\$0	\$0		Each community contract now complete, expect funding within 2 weeks	
Imperial County EC	CA	\$954,876	\$642,103	\$312,773			
City of Watsonville	CA	\$8,500	\$8,500	\$0			
Jackson County, Florida EC	FL	\$81,870		\$81,870			
Crisp/Dooly EC	GA	\$70,659	\$50,258	\$20,401			
Central Savannah River Area EC	GA	\$17,807	\$17,807	\$0		+ \$40,000 requested	
Northeast Louisiana Delta EC	LA	\$357,534	\$357,534	\$0			
Macon Ridge EC	LA	\$571,789	\$571,789	\$0			
Lake County EC	MI	\$0	\$0	\$0		Recent MOU, no problems foreseen	
City of East Prairie MO EC	MO	\$258,574	\$258,574	\$0			
North Delta Mississippi EC	MS	\$0	\$0	\$0		\$155,000 requested	
Halifax/Edgecombe/Wilson EC	NC	\$2,947,368	\$2,947,368	\$0		Incorrect data	
Robeson County EC	NC	\$2,947,368	\$2,947,368	\$0		Incorrect data	

La Jicarita EC	NM	\$346,218	\$346,218	\$0	\$0
Greater Portsmouth EC	OH	\$1,387,407	\$1,387,407	\$0	\$0
Southeast Oklahoma EC	OK	\$814,185	\$465,699	\$348,486	
Josephine County EC	OR	\$0	\$0	\$0	\$420,277
City of Lock Haven Federal EC	PA	\$101,859	\$101,859	\$0	\$0
Williamsburg-Lake City EC	SC	\$42,825	\$42,825	\$0	\$0
Beadle/Spink/South Dakota EC	SD	\$2,751,000	\$2,751,000	\$0	\$0
Fayette/Haywood Co.s EC	TN	\$0	\$0	\$0	\$70,528.66
Scott/McCreary Area EC	TN	\$1,070,529	\$1,070,529	\$0	\$0
Accomack-Northampton, Virginia EC	VA	\$500,855	\$500,855	\$0	\$0
Lower Yakima County Rural EC	WA	\$982,486	\$982,486	\$0	\$0
Central Appalachia EC	WV	\$482,500	\$56,500	\$426,000	
McDowell County EC	WV	\$1,953,387	\$1,953,387	\$0	\$0
Total Rural Drawdowns		\$24,923,738	\$23,477,567	\$1,446,171	
Total Urban Drawdowns		\$13,526,350			
Total Rural Available		\$202,002,309	Rural % Used	12%	
Total Urban Available		\$797,997,651	Urban % Used	2%	

Percentage of SSBG Funds Drawn Down



BELZONI, MS, CATFISH FACILITY

Ms. LONG THOMPSON. With regard to the catfish facility, it is in Belzoni, MS, and it is helping to create about 171 jobs.

Senator COCHRAN. Was it an existing facility or a new facility, the freshwater farm?

Ms. LONG THOMPSON. It's an existing one that has been expanded. It is going to be moving to employ up to 236 people.

SUBMITTED QUESTIONS

Senator COCHRAN. OK. I have other questions, as I indicated, and we will submit those and ask you to respond to them in a timely fashion.

Thank you so much. You have been very cooperative. We appreciate it very much.

It is a pleasure to work with you.

Ms. LONG THOMPSON. Thank you.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

Staffing, Expenses And Travel

Question. To what extent, if any, are expenses of the Office of the Under secretary for Rural Development, including those of staff, being charged to the agencies under the jurisdiction of this office or other USDA agency.

Answer. There are currently ten employees working out of the Under Secretary's office. Five of these employees are being paid out of funds appropriated to the Office of the Secretary; the remaining five are charged to the agencies under the jurisdiction of this office.

Question. Please provide the FTE's funded in the FY 96 appropriation for the Office of the Under Secretary for Rural Development and the current on-board staffing level (FTE equivalent) in this office.

Answer. There are five available staff years for this office. They are all currently filled and fully funded at this time.

Question. What is your policy on detailing USDA or other federal agency personnel to the Office of the Under Secretary for Rural Development? Please provide a comprehensive list of all USDA or other federal agency detailees to your office in the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer. Mr. Chairman, there is no established policy for detailing staff to the Office of the Under Secretary. We periodically detail staff to perform certain functions that are being managed directly by the Office of the Under Secretary. We have one such activity underway at the moment regarding field office restructuring associated with the implementation of the centralized servicing effort. This is a mission area wide activity and is being managed by my office rather than one of the three services. We have also detailed other employees that report directly to me and are necessary to carry out the responsibilities of the Office. With all due respect to the Committee, I find the use of detailees necessary to properly oversee agencies with several thousand employees located throughout the country; the delivery of several billion dollars in programs each year; and the monitoring of direct and guaranteed loan portfolios in excess of \$100 billion, especially at a time when we are also implementing a significant reorganization and a number of streamlining initiatives. Each one of these activities requires direct involvement of this Office.

The \$560,000 appropriated to my Office for 1996 is sufficient to pay the salaries and benefits of the Under Secretary, the two Deputy Under Secretaries, and two clerks, plus office supplies and expenses and some travel. I understand that there has been no increase in this appropriation for a number of years and the appropriation was decreased from the 1995 level.

The following table lists current staff on board in my office from other agencies who assist with various mission area-wide activities.

Office of the Secretary
Under Secretary for Rural Development

<u>Title</u>	<u>Grade</u>	<u>Employed By</u>
Special Assistant	ES-2	FS
Senior Policy Advisor	GS-15	RBS
Confidential Assistant	GS-12	RBS
Motor Vehicle Operator	WG-6	RHS
Staff Assistant	GS-6	RHS

Question. Are employees of the agencies within the jurisdiction of the Under Secretary for Rural Development currently detailed to other USDA or other federal agency offices? Please provide a comprehensive list of all employees detailed in the past year, the length of detail, and the purpose of the detail.

Answer. Yes, The following employees were detailed to other USDA or other federal agency offices in the past year:

*Jana Blair (RHS): To the White House Vetting office for interviewing candidates for Presidential appointment and presidential nominations. (6 months detail)

Deborah Matz (RHS): to the Farm Service Agency (FSA) as chairperson of the Loan Resolution Task Force. (1 year Detail)

Julie Demeo (RHS): To the White House to perform public affairs and policy assignments in the Domestic Policy council Office. (1.5 year detail)

*Estela Diaz (RHS): Detail to the Animal and Plant Health Inspection Service to assist in the work of the ADP Contract Team. (Indefinite)

Rajiv Rastogi (RUS): Detail to the Agency for International Development to revitalize rural infrastructure. (2 year detail)

William E. Davis (RUS): Detail to the Combined Federal campaign to assist with Combined Federal Campaign activities. (4 month detail)

Susan G. McNay (RUS): Detail to the Office of Presidential Personnel. (6 month detail)

*No longer on Agency Rolls.

Question. Please provide a detailed list of all foreign travel taken by the Under Secretary, or any employee of that office, or the head of any agency reporting to the Under Secretary, including: duration, destination, cost, purpose, account charged for the cost of the travel, and the number of employees accompanying the individual. Also provide information on foreign travel of all employees of the agencies to include number of trips, total cost and account charged, summarized by major categories for the purpose of travel, e.g., to present professional papers, do scientific research or fieldwork, to attend meetings, etc.

Answer. The Under Secretary for Rural Development has performed no foreign travel during fiscal year 1996. Only one employee of the agencies within the jurisdiction of the Under Secretary has performed foreign travel during this period. Details on these two trips follow:

A 7-day trip to Sydney, Australia at a cost of \$186.25. The purpose of this trip was to speak at the 1995 Key Issues Conference. The cost was charged to Rural Business-Cooperative Service and the traveler's expenses for airfare and lodging was paid by the New South Wales Registry of Cooperatives.

A 3-day trip to Vancouver, Canada at a cost of \$242.50 to attend a forum and seminar. The cost was charged to Rural Business-Cooperative Service and Expenses for airfare and lodging were paid by the Canadian Cooperative Association.

Rural Development

Question. Secretary Long, according to the Economic Research Service (ERS) of USDA, manufacturing employs 2 to 3 times more rural people than agriculture, forestry and fishing combined. To what extent do the programs under your jurisdiction work to assist in the creation of additional jobs?

Answer. Mr. Chairman, the purpose of all of the programs administered by the Rural Business-Cooperative Service (RBS) is the creation or saving employment opportunities in rural areas. Further, all of the other programs under the supervision of the Rural Development mission area contribute to the employment base of rural communities either directly or indirectly through the provision of short-term construction jobs and for the longer-term with permanent employment in expanded hospital or health care facilities, for example. We estimate the 1997 budget request for the financial assistance programs administered by RBS will create or save over 90,000 jobs. In 1995, 50 percent of the loans guaranteed under the Business and Industry program were for firms in the manufacturing sector, followed by 24 percent in the retail sector and 16 percent in the services sector. Only 4 percent of the funds were utilized by firms in the agriculture, forestry and fishing sector.

The services provided by the Cooperative Services component of RBS also result in a significant of jobs created in rural areas. These jobs will be primarily in the agriculture sector which is still a key part of many local economies. The Alternative Agricultural Research and Commercialization Corporation (AARC) is another good example of job creation potential in rural areas. The AARC estimates that its investments, based on the 1997 budget request, will generate 1,200 new jobs in rural areas, and even more important in AARC's case is that the investment benefits remain in rural areas through new value added to crops.

The investments made in the electric, telecommunications, and water and water infrastructure of rural areas will generate over 330,000 jobs, primarily in the construction trades, in rural areas. In addition, the investments made in Distance Learning/Telemedicine projects will generate 1,200 employment opportunities in the information industry. The investments made in the housing and community facilities programs administered by RBS will generate over 100,000 jobs, most of which will also be in the construction trades, and add \$3.3 billion to the value of local tax bases.

Question. Is there any research which enumerates the jobs that are directly attributable to these programs?

Answer. Mr. Chairman, we use a variety of sources for this information, including the application form for some programs which asks how many jobs will be created or saved. We also use information developed by the National Association of

Homebuilders, the American Public Works Association, the Bureau of Labor Statistics and other industry related organizations to develop indices of the effects of the programs on rural areas. While some of the data we use is not directly attributable to the specific programs, it is data that is accepted throughout a particular industry. For example, the National Association of Homebuilders estimates that each single family housing unit generates 1.9 work years of employment. This is data that is indifferent to origin of the financing for the housing unit, and is appropriate for use in our programs.

Rural Telephone Bank

Question. The budget justification indicates that the Administration will propose legislation to the Congress which will allow the privatization of the Rural Telephone Bank (RTB) by retiring the Class A stock.

The budget included a similar provision in FY 96. To my knowledge, the legislation was never submitted. When can we expect to receive the legislation for FY 97?

Answer. The President's FY 1997 budget proposal calls for privatization of the RTB in an administrative manner by the end of fiscal year 1998. RUS staff is currently working with the RTB's Board of Directors and other government agencies to craft legislation that will facilitate an orderly transition to privatization and prepare the RTB for future operations as a viable source of rural telecommunications financing. This legislation will be submitted during fiscal year 1996.

Question. The budget proposes a subsidy appropriation for the RTB of \$2.33 million to support a \$175 million loan level. For FY 96, the Department's subsidy request was \$5.02 million to again support a \$175 million loan level. This represents a 53 percent decrease from FY 96. Have interest rates changed so substantially as to decrease the subsidy rate by 53 percent?

Answer. Yes, the decrease is completely attributed to the downward trend in projected U.S. Treasury interest rates. Lower Treasury rates result in a smaller difference between the discount rate and the borrower rate and consequently, a lower subsidy rate.

Question. The FY 95 subsidy amount was \$770,000, a substantially less amount than the FY 96 or FY 97

level. Can you please justify the subsidy rate formula for this program?

Answer. The direct loan subsidy cost is the estimated long-term cost to the Government of a direct loan. RTB loans are direct loans calculated on a net present value basis, excluding administrative costs. Specifically, the subsidy cost of a direct loan is the net present value, at the time the direct loan is disbursed from the financing account, of the following cash flows:

- loan disbursements;
- repayments of principal; and
- payments of interest and other payments by or to the Government over the life of the loan, including estimated defaults, prepayments, fees, penalties, and other recoveries.

If the RTB were not a quasi-governmental stock corporation, the subsidy amount would be very small. Because the RTB's interest rate charged on loans is approximately the RTB's cost of capital (i.e., Treasury borrowing rate for financing account loans and there has never been a default, there would be little if any subsidy. However, because the Bank has a stock ownership structure, the calculation is more complicated. The factor that increases the subsidy cost for the RTB is the requirement to include amounts for Class B stock purchases in the RTB loans advanced. Class B stock, which borrowers are required to purchase when receiving a loan in the amount of 5 percent of the loan amount, is included in the "disbursement category" of the subsidy calculation. Borrowers, each time they get an advance of funds, purchase on credit an amount of Class B stock equal to 5 percent of the advance. The purchase on credit; i.e., borrowing, for the Class B stock bears interest at the same rate as the amount of principal advanced. Borrowers then repay the cost of the Class B stock, over time, along with the repayment of the underlying advance. For example, a loan amount of \$1,000,000 would require a stock purchase of \$50,000, making the face amount of the loan \$1,050,000. The RTB would borrow \$1,000,000 from Treasury and upon advance, or disbursement, of funds, the borrower would receive \$1,000,000 in cash but would be required to repay \$1,050,000 amortized over the life of the loan. The RTB does not borrow money from Treasury, or anyone, for the \$50,000.

Each year the Bank determines the interest rate it charges its borrowers based on a statutory formula. The statutory formula was designed to ensure that the interest rate the Bank charges its borrowers approximates the Bank's cost of funds borrowed from

the Treasury. The statutory formula states that for purposes of setting that rate, interest paid on Class B stock should be zero. This results in the Bank charging its borrowers an interest rate slightly below the treasury rate. The subsidy calculation includes the "interest free" loan for the purchase of the Class B stock.

Section 502 Single Family Housing Loan Program

.Question. Ms. Kennedy, you mention in your prepared statement that the new Dedicated Loan Origination and Servicing System is estimated to save more than \$250 million in its first five years. How does the Department calculate this amount?

Answer. The Department has identified the \$250 million savings from four components: escrow value, voucher savings, reduced default and foreclosure costs, and personnel.

Escrow value: Interest earned on the escrow deposits, late fees, non sufficient fund charges and income from forced placing insurance will generate approximately \$11 million a year income when fully operational.

Voucher savings: Currently the agency vouchers over \$50 million dollars a year for unpaid property taxes. The cost of vouchering and losses related to the vouchering policy will be almost totally eliminated with the DLOS system.

Reduced default and foreclosure costs: There are significant savings related to managing the portfolio more consistently on a nationwide basis.

Personnel: Fewer employees will be required to service the loan portfolio from a central location compared to our current 1200 offices across the nation. Six hundred FTE slots will be shifted to St. Louis from the field to staff the Centralized Servicing Unit; 900 FTEs will be redirected in the field to help meet the critical needs of other rural development programs; and 600 FTE slots will be eliminated in the field.

Question. Are there any savings that will be realized for FY 97?

Answer. Yes, we estimate the FY 97 savings to be \$8.7 million, and this amount is reflected in the request for Salaries and Expenses.

Question. How will this new system affect subsidy rates for FY 97 and thereafter?

Answer. The subsidy rate projected for the Section 502 direct loan program for FY 1997 is 8.30%, down from 14.30% calculated for FY 1996 budget execution. The principal reason for the lower subsidy rate is the projected downward trend in U.S. Treasury interest rates. The reduction in the subsidy rate due to the savings that will accrue from enhanced servicing and loan making under the DLOS system has also been included. If the Agency experiences superior loan underwriting and servicing results beyond our current expectations, those results may be cause for further subsidy rate reductions in future year budget submissions.

Question. What is the staffing level expected at the new DLOS Center once it is fully operational?

Answer. By the end of Fiscal year 1997, the full staff of 633 people should be on board at the DLOS Center.

Question. Do you expect any reductions in field staff as a result of instituting this new system? Will any be realized for FY 97? Does the budget reflect this?

Answer. Between 500-600 FTE's will be released by the end of fiscal year 1997 over the entire mission area. The budget reflects all staff positions anticipated costs and savings resulting from the implementation of centralized servicing.

Question. Ms. Kennedy, your prepared statement also mentions that the budget includes \$100 million for graduation of direct borrowers into the guaranteed program. How will this graduation work?

Answer. Independent studies from GAO and OIG have stressed the need to improve the graduation rate of RHS direct Section 502 loan borrowers into private sector credit. Many direct borrowers who had loans with high interest rates have refinanced with conventional lenders. However, some direct borrowers who obtained their fixed rate loans at rates significantly above the current prevailing market rate lack sufficient equity or enough savings to qualify for a conventional loan and consequently are still forced to pay high unsubsidized interest rates in the direct Section 502 program.

Borrowers are currently statutorily prohibited from using the Section 502 guarantee loan program to refinance their Section 502 direct loans. The Department is submitting a legislative proposal to

remove this statutory prohibition. RHS believes that allowing borrowers to refinance and graduate to the Section 502 guarantee program is the key step in moving them to full private sector credit.

To determine eligible candidates for graduation through refinancing, the Central Servicing Center in St. Louis will develop a list of potential graduation candidates considering such factors as qualifying ratios and payment history and forward this list to our local Rural Development office for follow-up. The local office will work with the borrower to obtain the guaranteed loan.

The President's Budget requests \$100 million for a guarantee refinancing program which would assist approximately 3,000 homeowners. Since all of the refinancing loans are seasoned, the risk to the Government is minimized in the refinancing program and therefore the subsidy cost (4 cents per \$100) of the guarantee for refinancing would be significantly cheaper to the government than the subsidy cost of a guarantee for the purchase of a home (27 cents per \$100).

Question. Will the graduation of these borrowers affect the subsidy rate for the direct 502 program?

Answer. Not immediately. The subsidy cost for the direct loan program is recorded in the year in which the loan is made. Graduations on loans that have already been made do not affect the subsidy rate directly. However, eventually the loans made today will graduate sometime in the future may be used in determining the subsidy rate on these loans. But the impact may be small because loans that qualify for graduation would most likely not be receiving payment assistance, so very little reduction in interest assistance will be attained.

Question. The budget indicates that the program level proposed in the budget for the direct 502 program will support 20,910 loan units. What is the projected carryover of applications from FY 96?

Answer. The carry-over is expected to be approximately 46,000 applications.

Question. On October 27, 1995, the Rural Housing Service issued new program rules for the section 502 loan program. One set of changes affected payment assistance. Under the new rules, borrowers' minimum payments are increased from 20 percent of adjusted family income for principal, interest, taxes and insurance to 22, 24 or 26 percent, depending on the borrower's income. The new rules also establish

minimum interest rates for the loans that are tied to the borrower's adjusted family income. The rule changes the underwriting procedure by substituting an income ratio analysis approach for a family budget analysis approach.

What effect will these changes have on borrower eligibility? How many families do you expect will be denied loans that would have been eligible under the new rules? Is the new underwriting procedure more in line with commercial lending practices? What effect will these changes have on the subsidy rate for FY 97 and subsequent fiscal years?

Answer. In developing the regulation, we estimated that approximately 10 percent of the applicants that would have qualified under the old rules will not qualify under the new rules. The implementation of loan ratios instead of a family budget was expected to reduce the number of eligible borrowers by approximately 10 percent, but improve the credit quality of the loan portfolio and reduced the cost of the program. Under the new regulation potential borrowers who cannot meet the minimum payment or whose additional debt causes them to exceed the total allowable debt ratio are not eligible for a loan. We believe this requirement will result in a home buyer who will be more successful in meeting financial obligations in the years to come. Our Rural Development Policy and Planning Staff is currently conducting an analysis of recent applications to determine the actual impact of the new regulations on borrowers.

The new underwriting procedure is more in line with commercial lending practices. Ratios have been used by commercial lenders for many years. Ratios are a proven indicator of borrower repayment ability and projected borrower success. Raising the floor payment from 20 percent of adjusted family income to 22, 24 or 26 percent is more in line with the 29 percent maximum figure that conventional lenders use.

These new procedures will result in increased credit quality and lower interest subsidy. They are part of the reason the program subsidy rate is projected to be only 8.30 percent in FY 1997.

Rural Business-Cooperative Service

Question. The budget request for the Rural Business - Cooperative Service programs is \$968 million. This represents an increase of \$143 million over the FY 96 appropriated level. Included in this amount are \$50 million in a new Direct Business and

Industry Loan program and substantial increases in all other programs under this program area.

Due to fiscal constraints, this subcommittee was unable to provide funding for the new Business and Industry loan program in FY 96. I anticipate that our FY 97 allocation will be at or below a freeze at the FY 96 level. If this is the case, would you support reducing other programs to begin this new loan program?

Answer. Because the proposed Direct Business and Industry loan program has a negative estimated subsidy rate for FY 1997, no budget authority is necessary to support this loan program. Therefore, we would not need to reduce any other rural development programs in order to begin this new loan program.

Question. The budget justification states that Local Technical Assistance and Planning Grants are included in the Rural Performance Partnership proposal, but that no funds have been identified at this time. When Congress rescinded FY 95 funding for this program, it was based, in part, in the fact that the Administration had not promulgated regulations to utilize this funding. Have these regulations been promulgated? If not, why do you propose to include this in the RPPI?

Answer. Regulations had been drafted, but further work on them was suspended after the FY 1995 funds were rescinded. We anticipated that when Rural Performance Partnership Program (RPPP) was adopted, we would proceed with the promulgation of the regulations, so the program could be utilized through RPPP.

Rural Utilities Service Distance Learning and Telemedicine Program

Question. The budget proposes funding for the Distance Learning and Medical Link Grants at a level of \$20.2 million, an increase of \$12.7 million, or 170%. At the same time, you propose a new Distance Learning and Medical Link Loan program, with a program level of \$125 million, and a subsidy cost of \$2 million. It is quite obvious that the higher program level per dollar appropriated is for the loan program.

It is very likely that this subcommittee will have an allocation equal to or below its allocation for FY 96, making increases for the grant program unrealistic. If this is true, would the Department

support a reduction in the grant program from the FY 96 level to support the new loan program.

Answer. Mr. Chairman, the President's Budget reflects the very high demand for this program and our attempt to address the demand in the most cost effective manner which is to augment the grant program with a loan program. We certainly understand the dilemma of having insufficient financial resources to meet all of the needs, having had to weigh all options ourselves in constructing this budget.

Rural Housing Service

Rental Assistance

Question. Is the fiscal year 1996 funding and the fiscal year 1997 request for rental assistance sufficient to renew existing contracts in each of those years?

Answer. In FY 1996, we anticipate spending \$463,022,000 to renew rental assistance contracts. For FY 1997, our total rental assistance request is \$540,900,000. In FY 97, we expect that 33,347 contracts will come up for renewal. At our current estimated cost, these contracts would consume \$465,119,000. We have also provided funds to ensure rental assistance for newly constructed units. The remaining balance of funds will be used to strengthen viable but financially stressed existing projects by providing them additional rental assistance units.

Question. Is current available funding and that requested for fiscal year 1997 sufficient to meet all servicing requirements in each of these years? If not, what additional funds are required to fully address the need nationwide?

Answer. For servicing troubled projects and overburdened tenants, RHS funded 6,991 rental assistance units at \$87,807,000 during FY 1995, and anticipate funding 2,590 rental assistance units at \$35,178,000 during FY 1996.

Our most recent occupancy statistics indicate 86,355 overburdened tenants and 26,960 vacant units. To fully address all existing need, 113,315 additional rental assistance units are needed for servicing, of which 9,581 units will be provided from FY 1995 and FY 1996 funds. This leaves an unmet need for servicing rental assistance of 103,734 units.

Question. Please provide for the record information on the rental assistance cost per unit for new construction, renewing existing contracts,

servicing, and debt forgiveness. Also, please indicate the existing demand for each of these categories and how much of this demand the fiscal year 1997 budget request will support.

Answer. Our FY 1997 request for 5-year rental assistance units is:

	AVERAGE	EXISTING	NUMBER
TYPE OF UNIT	COST	DEMAND	REQUESTED
Renewals	\$13,948	33,347	33,347
New Construction	12,165	4,266	4,266
Servicing and Other	13,581	103,734	1,290
Debt Forgiveness	12,900	445	445
Total		141,792	39,348

Question. What are your current five-year projections of expiring rental assistance contracts and anticipated budget requests for renewal purposes?

Answer. The projected five year expiring rental assistance contracts and anticipated budget requests are:

	EXPIRING UNITS	AVERAGE COST	TOTAL COST
FY 1998	34,000	\$14,324	\$487,016,000
FY 1999	37,000	14,711	544,307,000
FY 2000	41,000	15,108	619,428,000
FY 2001	41,000	15,516	636,156,000
FY 2002	44,000	15,935	701,140,000

Question. What do your most recent survey results indicate on overburdened tenants and vacant units in need of rental assistance? Which states now have the highest percentage of tenants experiencing rent overburden? Which have the highest percentage of vacant units? What is USDA doing to address these problems?

Answer. Our most recent occupancy statistics from January 1995 indicate 86,355 overburdened tenants and 26,960 vacant units. The five-States with the highest number and percentage of overburdened tenants:

STATE	TENANTS	STATE	PERCENTAGE
Texas	5,583	Tennessee	33.98
Georgia	4,773	Georgia	33.33
Michigan	4,726	Mississippi	31.11
Florida	4,647	Louisiana	30.22
Mississippi	4,468	Kentucky	31.88

The five-States with the highest number and percentage of vacant units.

STATE	VACANT UNITS	STATE	PERCENTAGE
Texas	2,531	Oklahoma	9.97
Alabama	1,595	Alabama	9.94
Michigan	1,320	Texas	9.61
Florida	1,267	Nebraska	8.59
Georgia	1,120	Wyoming	8.35

States with the highest number of overburdened tenants or vacant units received the most servicing rental assistance units. In addition, we have been taking significant steps to assure that individual projects negatively impacted by local market conditions are put on servicing workout plans to correct the problem. We are aggressively pursuing the replacement of problem borrowers and management firms with those who are capable of meeting program objectives. It should be noted that both the number and percentage of overburdened tenants have been reduced during the past calendar year.

Section 515 Multi-Family Rental Housing Loan Program

Question. Now that Congress has reauthorized the program, how much of the FY 96 appropriation will be utilized for new construction?

Answer. We anticipate that approximately \$75 million will be utilized for new construction this fiscal year.

Question. What do you anticipate the needs are for FY 97 for both new construction and rehabilitation?

Answer. We estimate that we will have approximately \$60 million in repair/rehabilitation and \$160 million in new construction needs in FY 97.

Farm Bill

Question. The Farm Bill establishes a \$300 million mandatory account for certain rural development and research programs. Of this amount, one-third is available for rural development, one-third for research, and one-third for either at the discretion of the Secretary. Do you have a plan for dividing these funds among the programs eligible?

Answer. Mr. Chairman, we do not have a plan at this point in time. We are in the process of discussing a number of options for use of the funds and we hope to finalize a plan in the near future.

Question. How will the one-third for use at the Secretary's discretion be allocated among research and rural development?

Answer. Mr. Chairman, the Under Secretary for Research, Education and Economics and I are in the process of developing options for consideration by the Secretary.

Rural Utilities Assistance Program

Question. The FY 96 Agriculture Appropriations Act established the Rural Utilities Assistance Program (RUAP), which combined the funding for water and wastewater loans and grants with solid waste management grants. How has this new program worked? Has the division between loans and grants been similar to previous years?

Answer. The single account authorized for fiscal year 1996 has worked as we anticipated that it would. The authority to transfer budget authority between loans and grants has given State Directors the flexibility to approve projects that they would not have been able to approve in previous fiscal years. As of mid April of this year, 12 states had exercised the transfer; 9 transferring budget authority from grants to loans which meant they could fund additional projects because they, by the way of the transfer, had increased the amount of loan money available to them. Three states had transferred from loans to grants reflecting the need for additional grant funds and less loan funds within their State. Giving the State Directors the flexibility to tailor assistance based on the needs of their customers is a practice we should and will make more use of under the Rural Community Advancement Program authorized in the 1996 Farm Bill.

It appears that the division between loans and grants this fiscal year will be similar to previous

years. The ratio so far in fiscal year 1996 is similar to the ratio in fiscal year 1995.

Intermediary Relending Program

Question. In January, 1995, the Department issued draft regulations on the Intermediary Relending Program (IRP). It is my understanding these new regulations would reduce paperwork, and streamline the program. What is the status of these changes?

Answer. There was a 60 day public comment period during which 80 letters regarding the proposed new regulations were received. The comments were analyzed and summarized and a final rule was drafted. The final rule is currently circulating through the Department's clearance process. We expect to implement the new regulations prior to next fiscal year.

Question. Is there a backlog of applications for the IRP? What funding would be necessary to eliminate this backlog?

Answer. If applications continue to be filed at the current rate, it would take an appropriation of approximately \$213 million for FY 1997 to end FY 1997 with no backlog.

Question. Please provide the default and delinquency rates for this program for the past two fiscal years.

Answer. The delinquency rate for the IRP has never exceeded 1 percent. The only defaults or delinquencies that have occurred have been temporary.

Rural Utilities Service

Question. The Appendix to the FY 1997 budget under the category of "Trust Funds" displays a "Rural Telephone Bank Equity Fund." The accompanying narrative states that the fund was created in 1993.

Sec. 406(g) of the Rural Telephone Bank Act expressly prohibits the establishment of any reserve other than those referred to in that subsection or subsection (h). Neither of those provisions authorizes the creation of the "equity fund." While sec. 406(I) confirms investment in Treasury obligations by the Governor of the Telephone Bank in conformity with RTB's note with Treasury, it does not purport to authorize the creation of any new fund or new account. What is the statutory authority for creation of this "fund" referred to in the Appendix to the budget?

Answer. The Bank's Equity Fund is not a reserve. The Equity Fund was created following an exchange of letters between RUS, the Office of Management and Budget, and the Department of the Treasury. The Equity Fund was created to hold funds which represent certain equity interests of the Class B and C stockholders. Congress clearly recognized the existence of the Equity Fund in P.L. 103-129, when it authorized investment of funds from the account in obligations of the United States in P.L. 103-129.

Question. What is the fund's purpose?

Answer. The purpose of the fund is to hold amounts relating to certain equity interests of the borrowers and other stockholders of the Bank. The Bank is proposing to use these funds to retire the Government's investment in Class A stock of the Bank.

Question. Where are those purposes stated?

Answer. The purposes are stated in the approved minutes of the 105th Bank Board of Directors meeting held on May 7, 1993.

Question. Why is this trust fund necessary?

Answer. The trust fund was deemed necessary by the Board of Directors to hold certain equity interests of Class B and C stockholders.

Question. Was this fund created through a rulemaking as contemplated by the Administrative Procedures Act?

Answer. No. The Board of Directors initiated the establishment of the fund. The Equity Fund was created following an exchange of letters between RUS, the Office of Management and Budget, and the Department of the Treasury to hold certain equity interests of the Class B and C stockholders.

Question. Were the Class B and Class C private stockholders notified of the creation of this fund? If not, why not?

Answer. In accordance with the Bank Bylaws, prior to Board meetings stockholders are mailed copies of all sunshine notices detailing the Board's upcoming meeting agenda. In addition the purpose, details, and impact of the Federal Credit Reform Act which led to creating this fund were discussed and included in the minutes of the Board and Stockholders' meetings. I will provide the dates of the meeting for the record.

[The information follows:]

Regular Meeting Dates of Board of Directors

August 7, 1991	November 6, 1992	August 11, 1994
October 30, 1991	March 24, 1993	November 16, 1994
February 25, 1992	May 7, 1993	
May 19, 1992	August 5, 1993	

Question. By what authority are funds being transferred from the books and records of the Rural Telephone Bank into the "trust fund"?

Answer. The funds are not being transferred out of the Rural Telephone Bank. The Equity Fund is a subaccount within the accounting records of the Bank. Correspondence between RUS and OMB and Treasury established the accounting procedures and methodologies for transfer of cash to the Equity Fund.

Question. Did the RTB Board of Directors take any action to establish this fund? Were they consulted about its creation? Please document.

Answer. The Board of Directors initiated the establishment of the fund. The staff of RUS, in accordance with the Board's concerns, proceeded to establish the Equity Fund account and notified the Board of its establishment at the March 24, 1993, Board of Directors meeting.

Question. Who determines which monies are transferred into this "trust fund"?

Answer. As stated in RUS' letter to the Office of Management and Budget dated December 23, 1992, amounts transferred to the Equity Fund are based on 5 percent of the amount of loan repayments collected and available cash after meeting the Bank's other cash obligations, in the liquidating account which represents Class B and C stock amounts outstanding. The Governor determines the amount to be transferred on an annual basis and reports this information to the Board.

Question. Who determines the amount of funds that are placed in this "trust funds"?

Answer. The amount of funds which are placed into the Equity Account are determined by the Governor.

Question. The narrative statement on page 206 of the budget appendix indicates that "Class B Stock equity funds transferred into this account include: 1) five percent of each loan payment received in the financing account and 2) current Class B stock purchases in the liquidating account." Who made the determination that these amounts would be so transferred?

Answer. The percentage amount of funds to be transferred to the Equity Fund was determined by the

Governor based on requirements in the RĒ Act that borrowers purchase Class B stock equal to 5 percent of the loan amount.

Question. Under what circumstances will the "trust fund" monies be distributed?

Answer. The Bank is proposing to use funds in the equity account to retire the Government-owned Class A stock.

Question. To whom will such monies be distributed?

Answer. If used for the retirement of "Class A" stock, the Federal Government.

Question. Who will make (made) this determination?

Answer. The Board of Directors within the prescribed limits of the law.

Cooperative Service

Question. What resources are being dedicated to Cooperative Services programs? Answer. In fiscal year 1995, \$3,684,000 was dedicated to Cooperative Services programs for personnel and administrative costs. No funds for research through cooperative research agreements were allocated to the Cooperative Services programs in fiscal year 1995.

Question. What staffing support is being given to Cooperative Services programs? What has it been historically? What is it today?

Answer. Currently, Cooperative Services has an authorized personnel ceiling of 45. Average employment in the 1960's was 97; 1970's, 86; and 1980's, 71. The most recent 5-year history of staffing support follows:

Employment

<u>Fiscal Year</u>	<u>Staffing Ceiling</u>
1996	43
1995	45
1994	72
1993	69
1992	69

Question. Given changing markets and concentration in food industries' is the Department positioned properly to advise farmers and cooperatives on the best strategies to pursue?

The Department continues to provide information on changing markets under a number of different programs. Cutbacks in budget and staffing levels For cooperative programs have reduced efforts to advise farmers and cooperatives about these changes. Yet, the department strives to provide the best level of service that can be provided within the budget constraints.

Question. Do you expect any change in demand for Cooperative Services programs given the new farm bill? How is the Rural Development mission preparing to respond to this situation?

Answer. The Federal Agriculture Improvement and Reform Act of 1996 represents a fundamental change in policy direction by ultimately reducing the farm price support program which has been in effect for the past 60 years. This places producers of agricultural products at more risk in the marketplace due to price and income fluctuations. At the same time there are structural developments underway that are creating more vertically integrated production and marketing systems. Cooperatives represent a way for individual farm operators to join together to respond to these forces and thereby retain their independence and self-determination, and help maintain the viability of rural communities. It is expected that the demand for assisting producers will increase as they turn to various forms of group action as a way to fend for their market interests. Requests by producers for cooperative development assistance from Cooperative Services have become clear. We will make every effort possible to meet these requests to the best of our abilities within budget constraints.

Question. How does all the movement of Rural Development program responsibilities out to the State and State offices affect RBS' ability to conduct a National level program of research, education, and technical assistance? Is there reason for maintaining a National office presence for these activities?

Answer. The movement of program responsibilities to State offices through the Rural Community Advancement Program mainly affects financial programs of RBS, not the Cooperative Services programs. The legislative history of the Cooperative Marketing Act of 1926 is clear in Congressional intent to provide for a headquarters unit in the Department

to carry out programs of research, education and technical assistance to cooperatives. This activity is carried out by professionally trained staff of personnel who are specialists in the cooperative methods of conducting business. Cooperative Services of RBS is the only Federal program addressing this particular business form. Some of Cooperative Services' technical assistance work to help newly organizing cooperatives is being augmented by encouraging the appointment of a cooperative specialist in each State Rural Development office. This effort is quite limited and requires considerable guidance and support from the National office. It is also being assisted by partnership with Cooperative Development Centers through the Rural Cooperative Development Grant program.

Alternative Agricultural Research and Commercialization Corporation

Project Investment Repayments

Question. The budget includes \$6.975 million for the AARC Corporation in FY 97. How many payments did the AARC receive in FY 96, and how many does it expect to receive in FY 97?

Answer. The AARC Corporation has received partial repayments from five companies. In March 1995, the Leahy-Wolf Company of Franklin Park, Illinois, became the first company to begin repaying the AARC Corporation. The second royalty payment was received from Natural Fibers of Ogallala, Nebraska later in 1995. Leahy-Wolf uses crambe or rapeseed oil to make a biodegradable release agent for wooden forms used in concrete construction. Natural Fibers fills pillows and comforters with milkweed floss and markets the hypo-allergenic product internationally.

In 1996 BioPlus, Inc., of Ashburn, Georgia, and Aquinas Technologies of St. Louis, Missouri, were the third and fourth companies, respectively, to begin repaying the AARC Corporation. BioPlus uses a waste product, peanut hulls, as the carrier base for crop protection materials, and as flushable cat litter. Aquinas Technologies produces and markets ethanol-based products made from corn, including windshield washer fluid.

The fifth company to begin repaying is Stramit U.S.A. of Perryton, Texas. The company manufactures non-load bearing interior wall panels from 100 percent wheat straw. These panels have been installed in the new Washington, DC headquarters of the Natural Resources Defense Council now under construction at 1200 New York Avenue.

The equity arrangements between the AARC Corporation and its private sector partners usually do not require repayments to begin

before the third year. The five companies mentioned above began to repay earlier than expected.

In 1997, we anticipate additional repayments from these companies and believe other companies will also start to repay the Corporation. We are not certain of how many, however, as repayments are market-driven.

The AARC Corporation negotiates an exit strategy with every company in its portfolio. Each strategy is different. In some instances, the government Corporation will be repaid from royalties. Other agreements call for the companies to repurchase stock held by the AARC Corporation, if they do not go public. Most of these small companies are privately held.

Current repayments, and others which are expected soon, are on-going examples that the AARC Corporation program is working as Congress intended. These repayments have been placed in the Corporation's revolving fund to be reinvested in other companies.

Management Change

Question. The Conference Report accompanying the fiscal year 1996 Agricultural Appropriations Act notes issues raised by the Inspector General in his Semiannual Report to Congress for the first half of fiscal year 1995. What steps have been taken to address these? Has the report requested in the Conference Report been completed?

Answer. As you may know, it was the AARC Corporation that brought possible management problems to the attention of the OIG and asked for their advice. The issues brought to the attention of the OIG dealt with potential conflicts of interest on the part of three members of the Board of Directors. In its final assessment, the OIG determined that there were in fact no actual conflicts of interest. The Board members involved have since completed their service to the AARC Corporation and no longer sit on the Board. To ensure no future problems, the current Board of Directors has established a series of policy and procedure guidelines that avoid perceived or actual conflicts arising. In the Findings and Recommendations report to the AARC Corporation dated March 30, 1995, the OIG stated, "...we have accepted your management decisions on all recommendations." As far as the AARC Corporation can determine, the matter is closed.

QUESTIONS SUBMITTED BY SENATOR GORTON

ATTRA Program

Question. The ATTRA Program, which receives funding from the Rural Business-Cooperative Service (RBS), has responded to more than 2,638 Washington state farmers, agribusinesses and other agriculturists on questions related to sustainable farming practices.

Given the importance of marketing value-added agricultural products and increased emphasis on new domestic and international markets, is it possible for the ATTRA program to also assist farmers and rural businesses on questions related to marketing options for their products -- or do they already assist in this area?

Answer. ATTRA staff responded to an increasing number of questions related to marketing products, including more than 1,500 requests from individuals, businesses and communities who were exploring potential benefits of sustainable produced or value-added products for their farms and local economies. Also, ATTRA can and does refer callers, when appropriate to other sources of USDA assistance within RBS, Rural Development and in other USDA agencies.

Intermediary Relending Program

Question. You comment favorably on responding to customer needs and mention RBS proposals in 1995 for major rewriting of IRP regulations. When will these revisions to IRP regulations be adopted? Have you taken into consideration any feed-back from the local Economic Community Development Councils regarding their thoughts on how this program can be better administered?

Answer. Proposed new IRP regulations were published in the Federal Register on January 18, 1995. There was a 60-day public comment period during which 80 letters regarding the proposed new regulations were received from a variety of economic and community development organizations and other interested parties. All of the comments were analyzed, summarized, and considered in the drafting of a final rule. The final rule is currently circulating through the Department's clearance process. We expect to implement the new regulations prior to next Fiscal Year.

Pacific Northwest

Question. On page 5 of your testimony, you refer to work your agency has done to address the "economic ills of a regional economy impacted by changes in the timber industry" in the Pacific Northwest. You state that you have been able to help "build medical clinics and multi-family housing projects, provided clean drinking water for rural families, and created seed money to establish small businesses in timber reliant/dependent areas."

I am very interested in knowing the specific projects in the state of Washington that you have been involved with.

Answer. Attached is a listing for Fiscal Year 1994, 1995, and 1996 (to date) of all the projects funded in the State of Washington for the Pacific Northwest Timber Adjustment Initiative for the Rural Development programs, which includes the Water and Waste Disposal Loan and Grant, Community Facilities, Business and Industry Guaranteed Loan, Rural Business Enterprise Grant, and Intermediary Relending Programs (Attachment).

Rural Development Mission Area Pacific Northwest Timber Initiative Washington State

Fiscal Year 1994

Water and Waste Disposal Loan and Grant Program:

Collins Lake Community Club, Mason County

To improve existent rural water system.

Loan: Water \$554,500; Grant: \$115,500

Diamond Lake Water & Sewer District, Pend Oreille County

Subsequent funds to cover overruns for the replacement of iron removal filters.

Loan: Water \$805,500; Grant: \$354,700

Enterprise Estate Water Association, Whatcom County

Subsequent funds for a water system upgrade to include a new pumphouse/pumps and meters.

Loan: Water \$44,400

City of Entiat, Chelan County

To provide adequate fireflow, improve and upgrade the existent water system with the purchase of a site to add a reservoir.

Loan: \$848,600; Grant: \$795,000

Lewis County Water District #2, (Onalaska), Lewis County
To replace the present failing water system (spring source) with 1 to 2 wells.

Loan: \$379,000; Grant \$215,000

Malaga Water District, Chelan County
To merge several small water systems.

Loan: Water \$1,596,600; Grant: \$1,200,000

Sky Meadows Water Association, Snohomish County
Subsequent funding do to cost overruns to replace leaking asbestos pipe water mains.

Loan: Water \$27,000

City of Soap Lake, Grant County

To drill a second well to replace the present one which was declared a health hazard.

Loan: Water \$1,145,700; Grant: \$239,300

Summit Water & Supply Company, Pierce County

To upgrade water system already in use.

Loan: Direct Water \$2,000,000; Guaranteed: \$600,000

Sun Vista-Sunlight Owners Association, Island County

To replace old asbestos cement transmission and distribution lines.

Loan: Water \$550,000

Warm Beach Water Association, Snohomish County

To construct a storage tank, install a treatment plant, and equip a new well.

Loan: Water: \$750,000

Ashford Water District, Pierce County

To replace costs of pump repairs to restore community water supply.

Loan: ECWAG Grant \$29,000

Lopez Island School District, San Juan County

To correct a recent significant water source loss to the area's public school district.

Loan: ECWAG Grant \$330,600

Fisherman Bay Sever District, San Juan County

To build a new lagoon, shop office, and laboratory, and add chlorine treatment facilities, rehabilitate septic sites and replace pump.

Loan: Waste \$517,000; Grant \$345,000

Town of Garfield, Whitman County

To upgrade the present system which was under a health mandate from the State DOE.

Loan: Waste \$950,000; Grant \$1,735,000

Town of George, Grant County

To purchase property and construct/install an entire new central gravity sewage collection and treatment system.

Loan: Waste \$793,000; Grant \$1,481,800

PUD #1 of Stevens County- Clayton, Stevens County

To construct a new central collection and treatment system.

Loan: Waste \$382,300; Grant \$960,400

City of Sprague, Lincoln County

Subsequent funding to offset cost overruns to replace failing system.

Loan: Waste \$2,938,500; Grant \$497,000

City of Toppenish, Yakima County

To improve the city's existing wastewater treatment facility.

Loan: Waste \$3,380,000

City of Yelm, Thurston County

Subsequent funding to finish new central collection and treatment system.

Loan: Waste \$217,500; Grant: \$775,000

Community Facilities Loan Program:

Seventh Heaven, Snobomish County

To pave an existent partially paved/gravel public road.

Loan: Guaranteed \$30,000

City of Langley, Island County

To assist in the purchase and rehabilitation of an existing building for a city hall.

Loan: Direct \$370,000

City of Moses Lake, Grant County

To construct a fire station and fire training facility.

Loan: Direct \$3,020,300

Quinalt Indian Nation, Gray Harbor County

To consolidate all tribal administrative functions into one central building.

Loan: Direct \$2,399,400

Rural Business Enterprise Grants:

Port of Centralia, Lewis County

To develop an additional production area, including added storage areas.

Loan: RBEG Grant \$365,600

City of Forks, Clallum County

To construct an industrial park development with approximately eight new businesses.

Loan: RBEG Grant \$280,000

Lummi Indian Business Council, Whatcom County

To upgrade a shellfish hatchery and install new equipment.

Loan: RBEG Grant \$657,500

Quinalt Indian Nation/Queets Mini-Market,

Grays Harbor County

To construct and provide a market and services site for the area.

Loan: RBEG Grant \$466,850

Trico Economic Development District, Stevens County

To purchase and remodel an existing building to serve as a business "incubator" which will accommodate up to seven small businesses.

Loan: RBEG Grant \$400,000

Fiscal Year 1995

Water and Waste Disposal Loan and Grant Program:

Beverly Water District, Grant County

Subsequent loan to complete an upgrade to existing water system.

Loan: Water \$279,100

City of Chelan, Chelan County

To construct a new intake into the City's water source.

Loan: Water \$3,957,000; Grant \$1,823,000

Clear Lake Water District, Pierce County

Subsequent funding for cost overruns for a newly formed rural water district.

Loan: Water \$1,020,000

Collins Lake Community Club, Mason County

Subsequent loan to fund cost overruns in improvements to a rural water system.

Loan: Water 753,400

Jefferson County PUD #1-Triton Cove, Jefferson County

Subsequent funding due to cost overruns. The project was to improve water system.

Loan: Water \$161,000

Kittitas County Water District #3-Easton, Kittitas County

To upgrade the existing water system.

Loan: Water \$300,000; Grant \$247,400

Loomis Water Users Association, Okanogan County

To renovate and upgrade an existing water system.

The Training Station, Inc., Chelan County

Subsequent loan for additional assistance for leasehold improvements.

Loan: Guaranteed \$210,000

Kevin and Joy Gay, Yakima County

Funding of building and equipment for controlled atmosphere fruit storage.

Loan: Guaranteed \$1,200,000

Michael and Heidi Hakala, Yakima County

Loan funds will be used to build a controlled atmosphere storage facility.

Funds: Guaranteed \$1,650,000

Nisbet Oyster Company, Pacific County

Funds will assist in growing/harvesting commercial oysters for fresh market sale in the U.S. and Japan.

Loan: Guaranteed \$600,000

Rural Business Enterprise Grants:

Douglas County-Port, Douglas County

To create a small kitchen incubator.

Loan: RBEG Grant \$65,000

Lummi Indian, Whatcom County

Provide training to tribal members on raising and cultivating shellfish.

Loan: RBEG Grant \$279,360

Jamestown S'Klallam, Clallan County

Help a tribal shellfish processing project cover the costs of new food processing and waste handling regulations.

Loan: RBEG \$125,000

WA Association of Minority Entrepreneurs, Yakima County

Microenterprise program offers small loans, technical assistance training to new and emerging businesses.

Loan: RBEG Grant \$188,100 (expect obligation by June 15, 1996)

Port of Chehalis, Lewis County

To assist with retention of the IP Callison Company in Chehalis.

Loan: RBEG Grant \$200,000

Makah Tribal Council, Clallam County

To help the tribe complete a safe harbor for its fishing fleet.

Loan: RBEG Grant \$200,000 (expect obligation by June 15, 1996)

Skamania County-Port, Skamania County

Provide "gap" funding for the construction and improvements to a commercial building and property improvements.

Loan: RBEG Grant \$194,360 (expect obligation by June 15, 1996)

The Lending Network, Lewis County

To support a revolving loan fund to expand businesses in three countries.

Loan: RBEG Grant \$30,000 (expect obligation by June 15, 1996)

City of Colville, Stevens County

To provide access from a State highway over a railroad to an industrial park.

Loan: RBEG Grant \$190,000 (expect obligation by June 15, 1996)

Loan: Water \$190,000; Grant \$586,200

Town of Marcus, Stevens County

To replace most of the town's deteriorating water system.

Loan: Water \$117,900; Grant \$172,100

Town of Mattawa, Grant County

Subsequent loan due to higher bid overruns to improve the town's water system.

Loan: Water \$432,200

Naselle Water Company, Pacific County

To replace the entire existing water system.

Loan: Water \$1,525,600; Grant \$600,000

City of Oakville, Gray Harbor County

To provide existing system with improved backup, storage and replacement lines.

Loan: Water \$350,000

City of Pateros, Okanogan County

Subsequent funds needed to complete project by replacing 47% of distribution system.

Loan: Water \$535,300

Port of Royal Slope, Grant County

New construction of a commercial well and distribution line.

Loan: Water \$207,000

Pressentin Creek Community Club, Skagit County

To improve water supply and storage capacity with a new well, new pumps, new reservoir and replace water mains.

Loan: Water \$167,600; Grant \$260,000

City of Prosser, Benton County

To drill a well, install casings, new pump and pumphouse, and construct reservoir.

Loan: Water \$4,323,700

Rocky Butts Water Association, Douglas County

Subsequent grant to finish out an upgrade to a water system.

Loan: Grant \$175,000

Stevens County PUD #1-Halfmoon Ranchos, Stevens County

To upgrade and renovate an existing deteriorating water system.

Loan: Water \$190,500; Grant \$334,000

Stevens County PUD #1-Valley, Stevens County

To replace an outdated water system.

Loan: Water \$162,200; Grant \$330,000

Warm Beach Water Association, Snohomish County

Subsequent loan due to higher bidding for construction.

Loan: Water \$791,500

Westside Water Works, Inc., Wahkiakum County

Subsequent funding due to cost overruns incurred due to various delays in the reconstruction of an existing water system.

Loan: Water \$114,500; Grant \$30,000

Chelan County PUD #1-Peshastin, Chelan County

To develop and construct an entire new sewer system.

Loan: Waste \$943,100; Grant \$2,649,300

Town of Coulee City, Grant County

To replace sewer collection and treatment system.

Loan: Waste \$1,340,410; Grant \$1,575,190

City of Ilwaco, Pacific County

To replace extensive deteriorating collection lines and build new treatment plant.

Loan: Waste \$2,618,400; Grant \$1,485,100

Kittitas County Water District #2-Ronald, Kittitas County

To replace existing sewage system.

Loan: Waste \$233,400

Town of Lind, Adams County

To install a wastewater collection system and upgrade water distribution.

Loan: Waste \$303,500

Town of Mansfield, Douglas County

To renovate an existing sewage collection system.

Loan: Waste \$339,200

Pacific County-Eklund Park, Pacific County
To replace existing sewer system.
Loan: Waste \$317,100; Grant \$1,198,800

City of Snohomish, Snohomish County
Renovation of wastewater treatment plant.
Loan: Waste \$1,004,500

Town of Springdale, Stevens County
Subsequent funding due to bid cost overrun for the construction of new sewer system.
Loan: Waste \$117,800; Grant \$293,200

City of Westport, Grays Harbor County
Renovation and upgrading of an existing sewage treatment and collection system. .
Loan: Waste \$2,630,400; Grant \$269,600

City of Winlock, Grays Harbor County
Subsequent Funding due to delays and unanticipated cost overruns in the replacement of sewer mains and collection lines.
Loan: Waste \$1,230,500

Community Facilities Loan Program:

Makah Indian Tribes, Clallam County
To construct a protective breakwater and a commercial marina facility.
Loan: Direct \$1,633,400

Port of Kalamas, Cowlitz County
To construct a rail spur in an industrial area.
Loan: Direct \$735,800

Port Madison Enterprise, Kitsap County
Construction of a tribal museum and light manufacturing.
Loan: Direct \$451,000

Squaxin Island Tribe, Mason County
To construct a health care facility.
Loan: Direct \$600,000

Suquamish Tribe, Kitsap County
To renovate an existing Tribal Center.
Loan: Direct \$325,000

Seventh Heaven, Snohomish County
Subsequent loan due to cost overrun to pave an existing public gravel road.
Loan: Guaranteed \$36,000

Business and Industry Guaranteed Loan Program:

Country Counter Corporation, Spokane County
 To remodel an existing facility and upgrade equipment.
 Loan: Guaranteed \$620,000

Dennis M. and Patricia M. McDonald dba Arbys, Whitman County
 To construct and equip a new building to be operated by Arbys franchise.
 Loan: Guaranteed \$617,000

Omak Wood Products, Okanogan County
 In conjunction with a major restructuring of debt by the company; this loan will provide fixed term working capital.
 Loan: Guaranteed \$4,900,000

The Training Station, Inc., Chelan County
 To allow an existing fitness center to relocate to a larger building and expand business and operate under a Gold's Gym franchise license.
 Loan: Guaranteed \$400,000

Rural Business Enterprise Grants:

Jamestown S'Kallam Indian Tribe, Clallam County
 To improve the production efficiency of an existent oyster processing house with the addition of floor space and upgrading.
 Loan: RBEG Grant \$387,500

Lummi Indian Business Council, Whatcom County
 Subsequent loan due to cost overrun on equipment which will complete the renovation of a hatchery.
 Loan: RBEG Grant \$994,960

Makah Indian Nation, Clallam County
 To finish the paving of a parking lot and construction of a public handicap accessible restrooms in the business area.
 Loan: RBEG Grant \$389,100

Port of Centralia, Lewis County
 To construct a building to be used as an incubator for small and emerging businesses.
 Loan: RBEG Grant \$98,764

Port of Garfield County, Garfield County
 To renovate an existent building to keep a light manufacturing business from leaving the area.
 Loan: RBEG Grant \$85,000

Prosser Econ. Development Association/Wine Country Farm Kitchen,
Benton County To diversify this rural low-income economy, promoting
Up to 15 new small food processing and delivery businesses.

Loan: RBEG Grant \$15,000

Washington State Department of Agriculture, Thurston County
Establish a technical assistance structure to provide comprehensive
export development program throughout the State via contracting the
services.

Loan: RBEG Grant \$245,000

Intermediary Relending Program Loans:

Lewis County Econ. Dev. Council (The Lending Network), Lewis
County To establish the creation of a business development loan
program to provide needed financing for businesses to increase
economic activity and employment.

Loan: IRP \$1,000,000

Okanogan County Investment Association, Okanogan County
The funds will be used as a revolving loan fund to be administered by
the association.

Loan: IRP \$500,000

Private Industry Council (PIC) of Snohomish, Snohomish County
To provide PIC with the ability to set up a revolving loan fund to assist
approximately 20 business start-up and expansion in rural
communities.

Loan: IRP \$1,500,000

Quest for Economic Development, Chelan County
To enable this corporation to set up a revolving loan fund to assist

approximately 20 business start- up or expansion.

Loan: IRP \$1,000,000

Trico Economic Development District, Stevens County
Revolving loan fund to assist approximately 15 business start-up or
expansion.

Loan: IRP \$1,000,000

Fiscal Year 1996

Water and Waste Disposal Loan and Grant Program:

Highland Water Association, Snohomish County
Upgrade of a rural water system.

Loan: Water \$451,500

Lake Chelan Reclamation District, Chelan County

To install a filtration plant as required by DOH for water treatment.

Loan: Water \$1,070,000; Grant \$889,200

Lewis County Water District, Lewis County

Subsequent loan and grant for cost overruns to replace the present water system.

Loan: Water \$707,000; Grant \$112,700

Okanogan County Board of Commissioners, Okanogan County

To develop a replacement water system.

Loan: Water \$73,800; Grant \$233,600

PUD #1 of Jefferson County-Lazy C., Jefferson County

Subsequent loan for cost overruns to upgrade existing water system.

Loan: Water \$602,000

PUD #1 of Stevens County-Clayton, Stevens County

Subsequent loan and grant for cost overruns to construct a central sewage collection system and treatment facility.

Loan: Water \$1,542,800; Grant \$168,200

PUD #1 of Stevens County-Valley, Stevens County

To install a sewer system.

Loan: Waste \$272,600; Grant \$622,900

PUD #1 of Stevens County-Waitts Lake, Stevens County

To install a sewer treatment and collection system.

Loan: Waste \$1,726,500; Grant \$2,000,000

Business and Industry Guaranteed Loan Program:

Columbia Valley Health, Chelan County

To purchase an office building and computer system for managing accounts and patients records.

Loan: Guaranteed \$140,000

Question. The 1996 Farm Bill created a new source of funding for your department. The Fund for Rural America provides \$300 million for rural development and research activities over the next three years.

I am interested in knowing what the Administration's priorities are for this program in the Pacific Northwest.

Answer. Senator Gordon, we have not finalized plans for the utilization of these funds. The funds will be available for use through our existing programs, as you know and applicants in the Pacific Northwest will certainly be eligible for the funds.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

Fund for Rural America

Question. The farm bill provides a new mandatory account for research and rural development. The bill specifies that \$100 million annually shall be available beginning January 1, 1997 to be split evenly three ways:

- Rural development.
- Research.
- At the discretion of the Secretary for either rural development or research.
The Senate version of this provision allowed that only up to one third of the total amount could be used for research, the implication being that the Senate felt the bulk of this funding to be directed to rural development activities.

Have there been any decisions made regarding how the Secretary intends to allocate his discretionary one third amount?

Answer. The Secretary has not yet made decisions regarding the allocation of the Fund for Rural America.

Question. What role do you intend to take in this decision process?

Answer. My office is developing options for the use of these funds for consideration by the Secretary.

RURAL UTILITIES SERVICE

Distance Learning and Medical Link

Question. For the previous four fiscal years, Congress has included report language to the Agriculture Appropriations bill in the Distance Learning and Medical Link grants program of RUS calling upon the agency to support the Arkansas Communications project coordinated by the Arkansas Cooperative Extension Service on behalf of every Arkansas 4-year and 2-year public institutions of higher learning, many governmental units, county Extension offices, and research and extension centers. In anticipation of RUS support, the Arkansas Cooperative Extension Service (ACES) has attempted to work with you and your predecessor since November 1993.

Unfortunately, there is now uncertainty as to whether the Department will recognize the Congressional intent contained in previous reports in a manner to avoid a different course of action by the Subcommittee. What are you doing presently and what support can this subcommittee expect from RUS for the balance of this fiscal year?

Answer. The Rural Utilities Service's Distance Learning and Medical Link Grant Program, (DLML) has received significant support and recognition from rural educators and health care providers throughout the United States for its ability to provide funding for advanced telecommunication networks. The response to the DLML, a highly competitive program, with limited appropriations, has been overwhelming. During fiscal years 1993 through 1995, RUS received 353 unduplicated applications requesting over \$111 million in funding; however, only \$27.5 million was available.

For FY 1996, RUS has streamlined the DLML regulation which should result in more timely review of applications, and we have simplified the evaluation criteria which should help organizations, such as Arkansas Cooperative Extension Service. We anticipate the revised regulations will be published as a final rule in June 1996. Further, for FY 1997, the Administration has requested increased funding for grants from the present level of \$7.5 million, to \$20.2 million to meet the overwhelming demand for advanced telecommunications in rural areas. The 1996 Farm Bill included a loan component for the distance learning and telemedicine program. One million dollars of budget authority subsidy would allow \$102 million in loans to be made.

We are pleased to report that, with limited appropriations over the last 3 years, RUS has awarded four projects in Arkansas with over \$1.1 million in grant funding. These projects are: FY 1993, Baptist Medical Center, Arkadelphia, \$49,780; this project links to the Medical Center's affiliate in Little Rock to provide teleradiology services. FY 1994, University of Arkansas Medical Center, \$490,000. This project links seven rural hospitals with Little Rock to provide medical services to 26 rural counties in the eastern delta and central regions, Ozarks Unlimited Resources Educational Cooperative, \$450,000, this project consists of a consortium of 19 high schools to provide educational services to rural northern Arkansans; and, FY 1995, St. Edward Mercy Medical Center, \$115,000. This project provides better medical care to western Arkansas rural residents in Franklin, Logan, and Scott Counties. As a result of the implementation of these four projects

rural residents in rural counties throughout Arkansas will receive improved educational and medical services.

Question. What actions have RUS and its predecessor taken in support of this project since FY 93?

Answer. The Arkansas Cooperative Extension Service application was first submitted in January 1994 and again in January 1995. The project was evaluated by independent educational and telecommunications experts, along with other applications, in accordance with evaluation criteria contained in the DLML regulation. Although the project was competitive, limited grant funds precluded RUS from selecting the proposal for funding. For both applications, RUS provided detailed comments to the applicant which we believe will prove helpful as the Arkansas Cooperative Extension competes for grant funding in the future.

Water and Wastewater Programs

Question. The FY 96 bill combined the grant and loan functions of this program into a single account allowing the agency to transfer amounts to better satisfy the need for grant or loan requirements of specific projects.

Of the total amount made available, how much of this funding was used for grant applications and how much was used for loans?

Answer. As of April 22, 1996, 409 water and waste disposal grants have been approved for a total of \$244,600,140 and 550 loans approved for a total of \$410,447,160.

Question. What has been the impact of this process on project application approvals?

Answer. The single account authorized for fiscal year 1996 has worked as we anticipated that it would. The authority to transfer budget authority between loans and grants has given State Directors the flexibility to approve projects that they would not have been able to approve in previous fiscal years.

Question. Has this allowance better served the needs for small systems or regional systems?

Answer. The reduction in fiscal year 1996 funding for the water and waste programs has had a negative impact of funding of large, regional systems. Therefore, the single account authorized for fiscal year 1996 has not provided more assistance to the large, regional systems. To date most of the benefit has been to smaller water and waste projects.

Question. The FY 96 bill included a provision allowing a portion of the WIC carryover to be transferred to the water and wastewater program. We understand the amount for transfer will total \$36 million.

Will this amount be distributed by state allocation formulas, be added to the national reserve to supplement pooling of funds for special state needs, or allocated otherwise?

Answer. We are planning to utilize the funds to assist with Water 2000 projects. We are of the opinion that funds transferred from one program designed to assist low income families should be used for similar purposes which in this case is the elimination of health problems associated with the absence of safe water in communities and households. Once the funds have been transferred our State Offices will be asked to submit applications meeting the criteria to the National Office.

Rural Telephone Bank

Question. You indicate you will be proposing legislative language to facilitate the eventual privatization of the Rural Telephone Bank. In parts of my state, and in other states, there are still areas with no or inadequate telephone service. In addition, as rural areas try to move into the super-information age, updated communication systems will be essential. Can you provide information on to what extent areas of the country are still without any or adequate telephone service?

Answer. Rural America consists of 80 percent of the landmass of the continental United States. RUS borrowers provide service to approximately half of the country's rural areas. Currently, nationwide telephone penetration is 94 percent. However, as we move into the information age, more than just what is referred to today as basic phone service will be necessary, especially in rural areas. With new information capabilities requiring advanced technologies, less developed rural areas needing better infrastructure, and some areas still without any service--6 percent of the Nation, or 15 million American citizens--RUS stands ready to continue its partnership with rural America to ensure that rural telecommunications providers will have the means to modernize their networks and provide service to unserved rural areas. For example, native Americans in rural areas have the lowest telephone penetration rate nationwide--only 75.5 percent. Over the past 4

fiscal years, RUS has provided \$315 million in loans to 27 borrowers serving parts or entire reservations.

Question. What do you think the effect of privatization of the Rural Telephone Bank will be on meeting the challenge of making service available to all Americans?

Answer. Privatization and separation of the RTB from the RUS program will enable the RTB to leverage its substantial existing net worth, allowing it to provide financing for many of the avenues opened by the Telecommunications Act of 1996 for telecommunications providers.

RURAL BUSINESS SERVICE

Rural Technology Grants

Question. In fiscal years 93 and 94, we appropriated funds through this account which were allocated through the Cooperative Development Foundation and ultimately were used for activities based out of nine centers across the country. The primary purpose for this approach was to better coordinate the activities of this program, reduce administrative costs, and achieve other efficiencies.

USDA has issued a series of regulatory changes over the past couple of years which has brought some confusion to the implementation of this program. In fact, just this February a new set of regulations was published and in March, you published a notice for grant applications for FY 96. Unfortunately, many of the original nine centers have now depleted the remaining funds they received from previous fiscal years. To further complicate this issue, the new farm bill includes additional provisions regarding this program.

Do you think the February 1996 guidelines are more consistent with the intent of Congress as expressed in previous appropriations acts than the guidelines used to allocate funding in FY 95?

Answer. Yes, we believe the 1996 guidelines are more consistent with the intent of Congress.

Question. How consistent are the February guidelines with provisions in the new farm bill?

Answer. The new farm bill amendments to this program will necessitate changes in the guidelines since the authority for the Rural Technology and Cooperative Development Grant Program has been stricken and replaced with a new authority for Cooperative Development Grants. New guidelines will be

published for FY 1997. The February 1996 guidelines will still apply for the FY 1996 funding.

Question. How quickly will you be able to proceed with applications for FY 96?

Answer. The deadline for receipt of preapplications is May 10, 1996. We will proceed with processing the preapplications shortly after that.

Question. What is the status of the current request of the nine centers to get an extension of funding due to depletion of funds allocated in FY 94? If the extension is granted, would you intend to provide the extension of funds from the unallocated FY 96 account or from some other source?

Answer. The request for a time extension of 6 months was granted. The request for additional funds was denied because we had no funds to make available for this purpose.

Question. Do you intend to complete the FY 96 allocation based on the February guidelines or will you need to make changes to comply with new farm bill provisions?

Answer. The guidelines were published and preapplications were being prepared according to those guidelines prior to passage of the new farm bill. We will complete the FY 1996 allocation based on the February guidelines.

ATTRA

Question. ATTRA was transferred to this subcommittee's jurisdiction in FY 96 and has long been of great interest to me. It is anticipated ATTRA personnel will respond to more than 25,000 requests for information on sustainable farming practices from farmers, extension agents, and people engaged in all aspects of agriculture this fiscal year. Requests for the services provided by ATTRA are almost double what they were last year at this time. In fact, ATTRA will soon be going "on line" through the Internet.

Your budget request for FY 97 continues to support ATTRA and includes an amount of \$1.3 million which will be a slight increase from what they received this year, but very near the level of funding they had received in previous years when housed at the Department of the Interior. Can you comment on how well ATTRA is meeting the overall mission of your agency?

Answer. One of Rural Business-Cooperative Service's (RBS) mission goals is to assist in the development of strategic, sustainable and environmentally sensitive economic growth that meets the expressed needs of rural communities. The Appropriate Technology Transfer for Rural Areas (ATTRA) mission is to promote the adoption and practice of environmentally sound, sustainable agriculture by providing reliable and practical technical information about agricultural production and marketing to U.S. farmers. Not only do these two mission goals mesh well, but both ATTRA and RBS serve a farm-oriented clientele that is thirsty for information on how to farm and market more effectively. With farm program changes resulting in a lower safety net, farmers and ranchers are pressed to find self-help solutions and the combination of RBS and ATTRA addresses those critical needs. ATTRA's 800 number brings unique written summaries of technical information right to the rural mailbox.

Question. Due to the growing interest of sustainable agriculture, and products and services relating to sustainable agriculture, do you envision ATTRA taking a more active role in direct rural economic and business related activities?

Answer. The ATTRA role is one of an information provider on sustainable agriculture and related issues. That role is quite consistent with and complementary to the rural economic and business activities emphasis of RBS. We see potential for the ATTRA role to be extended more into marketing and development activities as additional resources and staff expertise become available.

Question. What is your agency, or USDA generally, doing to make people aware of the services offered by ATTRA? Are notices posted in various USDA offices around the country? Are there ways to better take advantage of the opportunities afforded by ATTRA going "on line"?

Answer. The RBS cooperative agreement with ATTRA includes funds for publication of a quarterly newsletter which reaches more than 8,000 farmers, agency and extension offices, grassroots farmer organizations and other information providers. An article in the March-April 1996 issue of RBS' *Rural Cooperatives* magazine introduces the ATTRA service. Regional and State personnel in USDA's Sustainable Agriculture Research and Education and Sustainable Agriculture Extension Training (also known as Chapter 3 or PDP) have received information on ATTRA's services. The National Agricultural Library lists

ATTRA regularly as a source of information, and ATTRA staff participate in "SANET," a list server on Internet which is part of the USDA-funded Sustainable Agriculture Network (SAN).

Since ATTRA was just transferred to USDA as of March 1, 1996, we have just begun the process of determining best means for communication with USDA offices. Also, as ATTRA was already responding to a record-breaking number of requests during that period, it has been necessary to work out better ways to match additional demand with its limited staff and resources.

ATTRA's work plan includes expanding its services through more effective use of the Internet, while continuing to serve farmers and rural communities who often have more limited access to electronic resources. Such added accessibility does not come without cost, especially in updating and reformatting materials for easier electronic access.

Questions. To what extent has ATTRA been successful in training USDA personnel, such as those within the Extension mission areas? Do you see any opportunities to expand the training capabilities of ATTRA to other parts of the Department, such as the rural business development agencies?

Answer. Under U.S. Fish and Wildlife Service (USFWS) auspices and continuing now with RBS, ATTRA staff have been involved with extension training activities in sustainable agriculture. These include being co-leaders with 1862 and 1890 extension personnel in USDA's Southern and Western regions, extension training project evaluation and organization of two regional extension training conferences. ATTRA staff have also responded to requests for training materials used in extension training sessions.

With ATTRA operating now under a USDA cooperative agreement, additional training opportunities beyond extension are expected. Recently both ATTRA and RBS have experienced more demand for training services than current staff can fulfill.

QUESTION SUBMITTED BY SENATOR KERREY

Partnership for Rural Nebraska

Question. Last year, a new collaboration was begun in Nebraska between the State, the University of Nebraska, and USDA-RECD. This new collaboration is known as the "Partnership for Rural Nebraska." In the fiscal year 1996 agricultural appropriations bill,

Congress included funding, under the Federal Administration account, to help get this new partnership off the ground.

The feed back I have received from people served by this program in Nebraska is very enthusiastic. Because USDA-RECD has been an integral part of the Partnership for Rural Nebraska, I would like to hear your views on how the program has been working. In addition, do you feel the Partnership's activities have assisted RECD in its mission?

I would like to simply acknowledge the assistance that the RECD personnel, both in Nebraska and in Washington, have given to Nebraska applicants in the Rural Business Enterprise Grants Program. As Nebraskans work to develop innovative initiatives for benefitting economic development in our rural areas, I appreciate the willingness of the RECD staff to give technical assistance.

Answer. Senator Kerrey, the Partnership for Rural Nebraska has been very successful in accomplishing many objectives of the Administration and this Mission Area in developing new and creative approaches to resolving rural economic development problems. The partnership is integrating resources for rural research, policy analysis, program delivery and other functions of rural development. The partnership is also consistent with the objectives of the new farm bill, which includes the program monies to be directed to the State governments. I understand that these monies will most likely be handled by the partnership in Nebraska. The partnership will most definitely assist this office meet its mission. I further understand the three core partners, the State of Nebraska, the University of Nebraska and USDA Rural Development plan to extend the membership to be even more effective in targeting and delivering rural development resources in Nebraska.

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

Rural Utilities Service

Question. Before enactment of the Federal Agriculture Improvement and Reform Act of 1996, the RUS had a program which was successful in assisting rural communities to upgrade their medical services and facilities. The Distance Learning and Medical Links Program, along with other similar initiatives offered by the Federal Government, was instrumental in rural development and medical service upgrade. Please

outline which specific projects and/or grants were initiated in Louisiana or were indirectly involved within our region.

Answer. In FY 1993, RUS awarded a \$499,000 grant to Northwestern State University of Louisiana, Division of Nursing, in Shreveport, Louisiana. The project, leveraging \$790,000 in non-federal support, provides medical education and other degree and continuing education programs to rural areas near Bunkie, Jonesboro, and Winnfield throughout central Louisiana. It should be noted that the DLML, which provides advanced telecommunications end use networking equipment, inside the school and hospital door, such as computers, video equipment and digital coding and encoding devices is but one area where RUS telecommunications program assistance has benefited rural areas in Louisiana. In conjunction with the DLML program, the RUS telecommunications loan program has provided millions of dollars of loan funds in Louisiana for advanced telecommunications facilities needed to build the transmission infrastructure up to the school and hospital door, as well as residences and rural businesses. Since FY 1992, the following amounts have been loaned to Louisiana borrowers for advanced state-of-the-art telecommunications facilities:

Fiber Optic Cabling, \$24.4 million, provides the backbone infrastructure for the information superhighway.

Digital switching equipment, \$22.5 million, necessary for providing all advanced services.

Enhanced features, \$4.2 million, allows the transmission of voice data on a single line; also provides custom calling features such as Caller I.D., Call Forwarding, etc. *Education Television, \$300 thousand.

Question. Louisiana, as a rural state, applauds RUS for helping to bring telemedicine issues to both urban and rural areas as a means of increasing productivity. Please summarize RUS's proposed regulations pertaining to the Distance Learning and Telemedicine Grant Program (CFR April 16, 1996 pg. 16683).

Answer. The proposed regulation was drafted to streamline and simplify the application and grant evaluation process. The regulation has been rewritten to make it more easily understandable and easier for an applicant to comply with when applying for a grant. In addition, the regulation will promote increased

participation by non-federal sources of funding, assist the most economically needy rural areas, and fund projects which serve the greatest portion of persons residing in the most rural areas. Further, the rule will maximize the benefits of Federal funding by requiring that projects are financially sustainable without the need for continuous grant funding.

The major change in the proposed rule from the existing program is the method in which applications will be reviewed and scored by RUS. The rule will evaluate applications based on six major areas: (1) The financial need of the community and the project; (2) the financial composition of the project; i.e., the ability of the project to secure outside sources of funding; (3) the comparative ruralness of the service area of the project; (4) the documented need for educational and/or medical services; (5) the extent to which the project connects with outside networks; and (6) the cost-effectiveness of the project design.

RUS believes that the proposed regulation, which establishes an objective format for ranking applications, will facilitate an increasingly efficient and timely review of applications. We expect the regulation to be published as a final rule in June 1996.

Question. How will the new regulations, when implemented, assist states such as Louisiana in upgrading its medical services to rural areas?

Answer. The simplified regulation will provide a straight forward way for needy applicants from low income areas to formulate competitive applications without the need for expensive grant writers or consultants. The regulation sets forth in relatively simple terms, a uniform application format, and a "no-nonsense" approach for articulating advanced telecommunications as a solution for addressing vital community needs. Under this simplified approach, applicants will be able, in simple terms, to: (1) explain the problem that the applicant is intending to solve; (2) set forth how the grant, as well as other funds will be used to solve the problem; (3) explain why RUS grant funds are needed; (4) show how the grant funds will be leveraged using the applicant's funds and other local and non-federal funding sources; (5) demonstrate the benefits of the project to rural areas; and, (6) show that the project will be sustainable without additional grant funds.

QUESTIONS SUBMITTED BY SENATOR KOHL

Rural Technology and Cooperative Development Grants

Question. In recent years, this Committee and the Congress have consistently indicated our support for providing funding under the Rural Technology and Cooperative Development Grants Program to centers for rural cooperative development. And yet, in my view, the Department has often misinterpreted our direction, and distributed the funds under this program in a different manner.

To try to avoid this problem in the future, the recently enacted farm bill revised the authorization for this program, and further clarified the intent of Congress by dropping the words "rural technology" from the program and specifically detailing a program intended only to support centers that foster cooperative development on a statewide or multi-state basis. In that context, I have several questions:

Will the fiscal year 1996 funding provided for the program be allocated using the old USDA interpretation of the program, or will the funds be awarded based on the clarified intent of Congress as specified in the new farm bill?

Answer. The guidelines for the FY 1996 funding period were published in February 1996 and they are consistent with the intent of Congress. Applications based on those guidelines were being prepared prior to passage of the new farm bill. We will complete the FY 1996 budget execution based on the February guidelines. New guidelines will be published for the FY 1997 budget.

Question. What is the Department's interpretation of section 747(a)(4)(e) of the Federal Agriculture Improvement and Reform Act of 1996? Specifically, would you agree with my interpretation of that language, which is that the funding provided for this program should be used to support a network centers for cooperative development, as opposed to a piecemeal allocation to a series of unrelated (and unleveraged) projects?

Answer. Our interpretation is that the Secretary shall make grants to qualified nonprofit institutions. The purpose of these grants will enable the institutions to establish and operate centers for rural applicants who chose to network on their own.

QUESTIONS SUBMITTED BY SENATOR BYRD**Rural Utilities Service**

Question. The national Water 2000 assessment conducted by the Rural Utilities Service (RUS) disclosed that 176,000 families in West Virginia live without an adequate supply of safe drinking water. The estimated cost of needed water development projects in West Virginia exceeds one-half billion dollars. What impact will the new Rural Community Advancement Program (RCAP) have on fulfilling the goals of Water 2000?

Answer. The Rural Community Advancement Program will provide flexibility to State Directors to transfer budget authority between programs. This flexibility coupled with an increase in funding for water and waste disposal loans and grants in fiscal year 1997 will help fulfill the goals of Water 2000.

Question. In what time frame will these goals be achieved?

Answer. This will be an ongoing initiative that targets resources within our rural water and waste loan and grant program to communities that need them the most.

Rural Housing Service

Question. Certain communities in West Virginia are experiencing a shortage of affordable, safe housing. At the same time, these communities are working to rehabilitate aging neighborhoods.

What assistance could the Rural Housing Service offer to local communities to help develop and implement housing policies that address both of these issues?

Answer. We have implemented several programs to assist communities that have special needs, to provide safe and decent housing and also to rehabilitate homes. Our state and local Rural Development staff work with local governments and nonprofit organizations to develop creative partnerships and deliver our resources to needy communities. Our Empowerment Zone/Enterprise Community initiative provides technical and financial resources to many underserved and poverty stricken rural communities across the nation.

All of our housing and community facilities programs are designed to help build and rehabilitate communities and provide decent and affordable housing. Our Section 504 loan and grant repair program is designed to assist elderly homeowners who need to make repairs to their home to correct structural problems or correct safety and sanitary problems. Grants can be made to individuals or families who cannot afford to repay a loan. In addition, the Rural Development State Directors and the National Office have reserve funds especially for targeted communities--those identified by the State Rural Development Office to be most underserved and in need.

Funding from the Administrator's National Office Reserve is available for hardship cases when an individual or family is currently without housing and is unable to find shelter on a temporary basis with other family members, relatives, or friends, or the applicant is occupying a structure that has been recently condemned by local authorities. In addition, a new initiative this year is a National Office Reserve fund to help the homeless. This initiative will make funds available for an eligible applicant who lacks a fixed, regular, and adequate nighttime residence and the applicant or family is living in a shack or shanty, often without plumbing, heating, or no sanitation facilities; in a car, an abandoned trailer or camper parked in the woods or on public land; sheltering with relatives in housing that may be substandard as well as overcrowded, etc.

SUBCOMMITTEE RECESS

Senator COCHRAN. This hearing is now going to be in recess. We will continue our hearings on the budget request for the Department of Agriculture on Tuesday, April 30, at 10 a.m. in this room, SD-138 of the Dirksen Senate Office Building. We will hear at that time from witnesses on the request for the Department's research, education, and economic programs.

The subcommittee until then stands in recess.

[Whereupon, at 11:34 a.m., Thursday, April 25, the subcommittee was recessed, to reconvene at 10:15 a.m., Tuesday, April 30.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

TUESDAY, APRIL 30, 1996

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:15 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Burns, and Bumpers.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF KARL N. STAUBER, UNDER SECRETARY, RESEARCH,
EDUCATION, AND ECONOMICS**

**ACCOMPANIED BY DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF
BUDGET AND PROGRAM ANALYSIS, DEPARTMENT OF AGRICULTURE**

AGRICULTURAL RESEARCH SERVICE

STATEMENT OF FLOYD P. HORN, ADMINISTRATOR

**COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION
SERVICE**

STATEMENT OF BOB H. ROBINSON, ADMINISTRATOR

ECONOMIC RESEARCH SERVICE

STATEMENT OF SUSAN OFFUTT, ADMINISTRATOR

NATIONAL AGRICULTURAL STATISTICS SERVICE

STATEMENT OF DONALD BAY, ADMINISTRATOR

OPENING REMARKS

Senator COCHRAN. This hearing of the subcommittee will come to order. Today, we are pleased to continue our hearings on the fiscal year 1997 budget request of the President for agriculture, rural development, and related agencies.

This morning we are specifically reviewing the budget request of the Agricultural Research Service; the Cooperative State Research, Education, and Extension Service; the Economic Research Service; and the National Agricultural Statistics Service.

We are happy to welcome the Under Secretary for Research, Education, and Economics Karl Stauber. He is accompanied by a

number of other officials. I will ask the Under Secretary to introduce everyone who is here with you, and we will begin reviewing your testimony.

We have a copy of your statement. We appreciate very much having that. We have copies of all the witness statements which have been submitted to us. We will make them a part of the record in full.

We encourage you to summarize your written statements and make any additional comments you think are appropriate and would be helpful to the committee's understanding of the budget request, then we will have questions from our subcommittee members.

Before proceeding to hear from our panel of witnesses, I'm happy to welcome our distinguished colleague from Montana, and ask if he has any opening statement that he would like to make.

STATEMENT OF SENATOR BURNS

Senator BURNS. Mr. Chairman, thank you very much. I would just submit my statement, because we do want to hear from the witnesses this morning.

Mr. Kaplan, you make every one of these, do you not? You are going to be worn slick like a river rock on this thing.

I want to point up a couple of things, some areas of concern. It seems as though we are having quite a lot of problems both here on the Hill and within the Department and within this country of really selling the idea of ARS.

I am concerned about it because our grain stocks are as low as they have been in my lifetime. Grain prices are absolutely just jumping over—I don't know what they did yesterday.

If I seem a little groggy, I spoke in San José, CA, last night at Silicon Valley to some technical people. They speak in technical terms and they are all what you used to call eggheads. They operate about two or three floors above me. Then I got on a 10 o'clock flight out of San Francisco and flew all night to get here for this hearing, because I felt that this hearing is probably one of the most important hearings that we will hold in appropriations.

Because we are having declining yields in wheat, we are losing plant breeders and researchers and I'm concerned about that. I am sincerely concerned about it because the first obligation, I think, as a government is to provide the infrastructure of research so this society can feed and clothe itself, the very, very basics.

I for one will be fighting for maybe a little bit more money than you request, because I have a feeling that we are in a time warp, it seems like. We are not having a lot of success, and we have got to tell the story of this production of food and fiber a little bit better.

Of course, our chairman here, understanding fiber and food both as well as he does, I think has his own concerns, as we have talked about what we do in the way of research, and then the extension, the outreach, to get that information out into the hands of people who really know how to use it.

PREPARED STATEMENT

If I could submit my statement for the record, those are my concerns. We probably won't get to all of my questions. I would ask permission if I might submit some questions at the end of the hearing, Mr. Chairman. If those folks could respond both to the committee and to me, I would be very much appreciative of that.

Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BURNS

Thank you Mr. Chairman, for calling this hearing today. The areas that we will hear testimony on today, is what I consider to be some of the most important in agriculture today.

I am talking about research and education. These areas are of great concern to me, considering what is and has been happening to agriculture in recent years. We have now placed our farmers in the marketplace, a situation that they as an overall group seem to be pleased with. Yet recent news from around the world shows us that there is still much to be done to understand the world of agriculture production.

Here in the United States, we have been hit with the discovery of a feed grain fungus that could have devastating effects on the agricultural production of the entire country. While across the Atlantic we continue to hear distressing reports of what is happening with the livestock industry. These are just a couple of the problems that agriculture faces, add to this the basic uncertainty of agricultural production.

Another of the issues that face our country is the new farm program that our producers are now evolving into. Under this program the majority of their earnings will come from working in the marketplace. With this in mind, I wonder how well our extension service is prepared to deal with the education of the producer in facing this new world.

Mr. Chairman, since this is such an important topic area for me, I will keep my comments short. I look forward to hearing the testimony of the panel before us today and I will work with them to make sure that American agriculture maintains its present position in the world as a shining star for others to seek.

INTRODUCTION OF WITNESS

Senator COCHRAN. Thank you very much Senator for your comments. We do request that any questions that are submitted would be answered as soon as reasonably possible. We would appreciate that very much. Senator, we appreciate your leadership in this area and in many others in the Senate, and we are glad you could come by this morning.

We would like for you, Mr. Secretary, to proceed now, to introduce the panel and give whatever statements you would like to make. Please proceed.

OPENING REMARKS

Dr. STAUBER. Thank you very much, Mr. Chairman, Senator Burns. Thank you for the opportunity to present the proposed fiscal year 1997 budget for the research—

Senator COCHRAN. Would you first introduce all of your panel members?

Dr. STAUBER. Yes, sir; I am happy to. Members of the panel today at the far end of the left, to your right, Mr. Don Bay, the Administrator for the National Agricultural Statistics Service. Next to him is Dr. Susan Offutt, Administrator of the Economic Research Service. Next to her is Dr. Bob Robinson, Administrator for the Cooperative State Research, Education, and Extension Service.

This is Dr. Cathy Woteki, the Deputy Under Secretary for Research, Education, and Economics; to my right and to your left is Dr. Floyd Horn, Administrator of the Agricultural Research Service; and as always Dennis Kaplan from the Office of Budget and Policy Analysis, USDA.

I would like to make a few comments. We have provided written testimony for the record. Then we would like to respond to questions that the committee may have. The Research, Education, and Economics [REE] serves two primary functions.

First, we are the knowledge base for USDA, for other Federal departments, for stakeholder communities, and for all who eat every day. We produce the statistical, biological, and economic and physical knowledge that aids farmers and ranchers, consumers, private corporations, conservationists, and policymakers.

Second, we are the primary link between the Federal Government and the land-grant university system. We operate America's original Block Grant Program, where Federal dollars are leveraged at least 3 to 1 by local and State resources throughout the United States to support extension, experiment stations, and critical academic and research efforts at land-grant universities.

FISCAL YEAR 1997 BUDGET REQUEST

The budget request before you is for approximately \$1.8 billion for fiscal year 1997. This is around the same level as the request for last year. The budget focuses on five broad objectives.

One, we are attempting to move under GPRA stating these in terms of outcomes, one, an agriculture production system that is highly competitive in a global economy; two, a safe and secure food and fiber system; three, healthy well-nourished children, youth, and families; four, greater harmony between agriculture and the environment; and, five, enhanced quality of life for citizens and communities.

Under the 1996 farm bill several innovations were put into place and we would be happy to respond to questions about them. We have a new advisory committee structure that we are putting into place. We sent out over 600 letters requesting nominations. We are expecting nominations by May 17, and we want to move forward aggressively to implement that new advisory committee structure. We are also putting into place a facilities review process to create a 10-year strategic plan, and the fund for rural America.

I must also point out we have a major concern about what was in the 1996 farm bill as it relates to research, education, and extension. While virtually all other parts of the farm bill received a 7-year enactment, the research component only received a 2-year enactment. We are concerned that as we move ahead with the future budget struggles, this leaves us exposed in a way that makes our future less certain.

GOVERNMENT PERFORMANCE AND RESULTS ACT

Before turning to the specific budget numbers, I want to mention briefly the the Government Performance and Results Act [GPRA]. Dr. Woteki is leading this effort for us. We are attempting to create for the first time an integrated strategic plan among all four of the agencies represented here at the table, so that we can do a better

job of coordinating the research conducted by us and by our partners in the land-grant community, but do it in a way that produces the maximum results with each dollar.

We have a draft plan out for review. We are right now getting input from our partners and our customers, and we will be doing a series of listening sessions around the United States over the next several months to obtain more input. We believe that GPRA helps to put us in a position to address some of the issues that Senator Burns has raised.

We recognize we need to do a better job of selling the relevancy of the work that we do, even though many times it may be a number of years before the general population can see the payoff from that work.

Now, turning to the specifics, I am going to talk about the four agencies briefly and hit the high points of each agency budget. Starting with the Agricultural Research Service [ARS], the proposal includes an increase of \$66 million or 9 percent above the 1996 appropriation. Of that increase, \$16 million is for research, \$50 million is for buildings and facilities.

AGRICULTURAL RESEARCH SERVICE

The ARS proposal includes \$7.5 million above the 1996 appropriation for food safety research to support the hazard analysis and critical control point model of pathogen control and reduction.

Second, funding is also proposed to improve our ability to preserve and expand USDA's genetic resource collections. Those collections are absolutely critical to the long-term viability of American agriculture.

Third, included in the request are: additional funds to promote effective biological control techniques for pests; to develop alternatives for methyl bromide; to establish effective livestock waste utilization management techniques; to develop integrated farming systems which will contribute to more sustainable agricultural production systems; to support the administration's initiatives in the south Florida Everglades; and to do work on two major facilities which need to be relocated because they are outdated and they are in close proximity to urban populations. In addition, the request also includes funds for updating and modernizing a number of our facilities around the country.

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

Now, let me move to the Cooperative State Research, Education, and Extension Service [CSREES]. The budget request for CSREES is \$842 million, a reduction of \$66 million or 7 percent over the 1996 appropriation.

This proposal reflects the administration's continuing view that the Federal Government ought to allocate resources based on competition rather than through earmarked grants. Proposed reductions for earmarked research and facility projects equals approximately \$100 million or 11 percent.

However, the budget provides a net increase of about 4 percent for more broadly based programs in support of research and extension at land-grant universities and other cooperating institutions. An increase of \$33 million is proposed for the National Research

Initiative. This is one of our critical efforts that has been underway for a number of years and badly needs to be expanded.

The budget also proposes increases related to integrated pest management, a good example of a cross-cutting initiative involving all four of the agencies and many other parts of the Department of Agriculture.

Now let me move to the Economic Research Service. As farmers are forced to rely more on markets instead of the Government to make decisions, it is critical for them to have access to objective and timely information about agricultural markets.

ECONOMIC RESEARCH SERVICE

The ERS request for fiscal year 1997 is \$54.9 million, an increase of \$1.8 million over fiscal year 1996. This includes \$0.7 million for pay raises and reduction in administrative overhead and a \$1.1 million increase for data acquisition and analysis of farm practices.

The proposed data acquisition and analysis funds will support evaluation of key Department conservation and environmental initiatives and represents an approach to integrating information on farm finance and environmentally friendly production practices. This is not duplicative of other Federal initiatives that are underway.

NATIONAL AGRICULTURAL STATISTICS SERVICE

Finally, let me turn to the National Agricultural Statistics Service. NASS continues to serve a critical role in supporting American agriculture. I strongly believe that quality, timely information is the bedrock of fair competition in this country. NASS is absolutely critical to the provision of that quality, timely information.

The primary activities of NASS are to conduct surveys which include the collection, summarization, analysis, and publication of reliable agricultural forecasts and estimates. We are requesting modest support for an increase in funding of these critical efforts.

In addition, the budget proposal includes a new \$17.5 million to fund the Census of Agriculture, which is being proposed to be transferred from the Department of Commerce to USDA in fiscal year 1997. The integration of the Census of Agriculture with USDA will enhance our current statistical work and improve the quality of the statistical work being done on agriculture throughout the Federal Government.

In summary, Mr. Chairman, I want to emphasize the benefit and importance of Federal investments in research, education in the economics mission area. We are confident that our ongoing work and our adoption of GPRA will enable us not only to establish priorities, but to meet the goals to move American agriculture into the next century.

Without investments in research, education, and economics, American agriculture cannot be as competitive in the 21st century. We look forward to working with this committee to ensure that we have the research and knowledge base that we need for the 21st century. I would be glad to try to respond to your questions.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Dr. Stauber, for your comments. We appreciate your summarizing them. We have your complete statement, and it will be made part of the record along with the statements of Dr. Horn, Dr. Robinson, Dr. Offutt, and Mr. Bay.

[The statements follow:]

PREPARED STATEMENT OF DR. KARL N. STAUBER

Mr. Chairman, Members of the Committee, I am Dr. Karl Stauber, Under Secretary for the Research, Education, and Economics mission area at the Department of Agriculture. I am accompanied today by my Deputy Under Secretary, Dr. Catherine Woteki, and the administrators of the four agencies that make up the Research, Education, and Economics mission area: Dr. Floyd P. Horn, Administrator of the Agricultural Research Service; Dr. Robert H. Robinson, Administrator of the Cooperative State Research, Education and Extension Service; Dr. Susan Offutt, Administrator of the Economic Research Service; and Mr. Don Bay, Administrator of the National Agricultural Statistics Service. Each of the Administrators will submit for the record individual testimony for the four agencies. We have come with a few of our senior staff to discuss the fiscal year 1997 Budget proposals in detail. Before we begin, however, I would like to make some general remarks about the REE mission area as well as the individual agency budgets from the standpoint of the Under Secretary's office.

The REE agencies play a critical role in supporting the work of other agencies by conducting high priority research and education on matters related to the environment, conservation, human nutrition, plant and animal diseases, food safety and new industrial uses for agricultural crops. Our data collection and analysis activities provide critical information about commodities and rural America to policy makers, program managers, and producers. REE also supports agriculture by collaborating with other Federal agencies on the programs they conduct that affect the food and agriculture sectors of the economy. The combination of the biological and physical sciences with the economic and statistical disciplines makes the mission area the basis of the agricultural knowledge and education system in this country.

Total funding requested for REE agencies in 1997 is \$1.8 billion, about the same as the 1996 appropriation. We want to emphasize that agricultural research and development is a sound public investment, not merely a government outlay. Each year, the value of products from the Research and Development "pipeline" far exceeds R&D expenditures. We know this in several ways.

First, the percentage of disposable personal income that U.S. consumers spend on food continues to decline. In 1994, food costs as a percent of disposable personal income for U.S. consumers were 11.1 percent as compared to 13.9 percent, 13.5 percent, and 11.8 percent for 1970, 1980, and 1990. Increases in agricultural productivity are a primary reason consumer food costs are declining and this is a fundamental basis for public investment to support agricultural technology.

Second, the rate of productivity in agriculture has grown faster than most other sectors of the economy—by a total of 300 percent since 1914 and with a growth rate of 1.9 percent annually since the 1940's. These gains reflect public investment in new technologies, which have enabled U.S. farmers to reduce the adverse environmental impacts of agricultural production, to improve the nutritional content of the food they produce, and to better compete in international markets.

Third, many studies have identified a significant public rate of return on investment in agricultural research. Estimated rates of return on basic research are very high—at 74 percent—while returns on all basic and applied research are estimated at 40 percent. These returns are generally higher than those reported by private entities.

The budget recommendations for the REE agencies reflect the importance that science, technology, economics, and statistical information has for the future performance of the agricultural sector in the U.S. economy. Even with the current emphasis on reducing public spending, the agricultural sector relies on overall scientific and technological excellence. Without gains in agricultural productivity, we cannot expect to continue to provide affordable and nutritious food to American consumers, to enhance farm income, to continue to compete effectively for export markets, and to mitigate the impact of agriculture on the environment. Further, the Federal support for science and technology encourages States to invest in research at levels beyond what they do otherwise, since many Federal programs create incentives

through Federal matching of State funds. Finally, publicly supported research provides a catalyst for private sector investment in science and technology.

While we have shared with you some of our successes as a result of public investment, in the future we plan to be able to demonstrate even more. Before I discuss the agency budgets, I want to briefly highlight for the committee a very important initiative throughout the federal government and one of great significance to REE. That initiative is our preparation to comply with the direction of the Government Performance and Results Act of 1993 (GPRA). Under the GPRA, federal agencies are required to convert the budgeting and planning process from a system based on "inputs" to a system that defines outcomes, measures performance against those outcomes, and holds agencies accountable for their performance. OMB has asked us to have this approach in place next year for fiscal year 1998, and under the leadership of Dr. Woteki, we have just completed the first draft of our strategic plan to share with you and our stakeholders. However, we are already in the process of organizing our existing activities within five priority outcomes. The five priority outcomes on which we are focusing our research agenda are: an agricultural production system that is highly competitive in a global economy; a safe and secure food and fiber system; healthy, well-nourished children, youth and families; greater harmony between agriculture and the environment; and enhanced economic opportunity and quality of life for citizens and communities.

AGRICULTURAL RESEARCH SERVICE

Total funding requested for the Agricultural Research Service (ARS) includes an increase of \$66 million, 9 percent above the 1996 appropriation. Of the increase, \$16 million is for research and \$50 million is for buildings and facilities. The ARS proposal includes an increase of \$7.5 million above the 1996 appropriation for food safety research to support the Hazard Analysis and Critical Control Point (HACCP) model for pathogen control and development of a science-based risk assessment inspection system. Expanded research on food safety is essential in several areas including intervention strategies, processing methods, diagnostic tools, and risk assessment. Funding is also proposed for improving our ability to preserve and to expand USDA's genetic resource collections. The collections underpin crop and animal breeding efforts throughout the United States. Preservation of and filling gaps in the base collection is essential for continued crop and animal improvements and is a unique Federal responsibility. Other increases for 1997 will enable us to promote effective biocontrol techniques for pests, develop alternatives for methyl bromide, establish effective livestock waste utilization management techniques, and develop integrated farming systems which will contribute to a more sustainable agricultural production system. ARS also plays an important role in the Administration's initiative to restore the South Florida Everglades ecosystem. The budget includes a \$2 million increase for research on sugarcane and biological control of aquatic weeds and \$4 million for construction of a quarantine facility for final testing of insects that will be imported from Australia to provide a means of natural control of *Melaleuca* trees in South Florida.

The budget also includes funds for two major facilities where we need to relocate laboratories that are outdated, and in areas where our activities are constrained by proximity to urban populations. These new facilities in Parlier, California, and Ft. Pierce, Florida, will enable us to continue to conduct vital research on citrus and other horticultural crops. Agriculture in California and Florida is intensive, diverse, and of high value. The research programs at these laboratories are among our highest priorities. If we neglect these programs, we risk enormous losses in domestic and export markets. The budget request for facilities also includes funds for modernization programs at Beltsville, several regional laboratories, Weslaco, Texas, and Plum Island, New York, and, as mentioned, to construct a weed control lab in Ft. Lauderdale, Florida.

COOPERATIVE STATE RESEARCH, EDUCATION AND EXTENSION SERVICE

The budget request for CSREES is \$842 million, a reduction of \$65 million, 7 percent below the 1996 appropriation. The budget continues to reflect the Administration's view that the Federal Government should not be financing research projects and facility construction activities on university campuses through the congressional earmarking process. Proposed reductions in these two program areas amount to approximately \$100 million, or 11 percent of the 1996 appropriation for CSREES. However, the budget provides a net increase of about 4 percent for more broadly based programs that support research and extension at Land Grant universities (LGU's) and other cooperating institutions. The funding for formula programs is held constant at the 1996 appropriated level. An increase of \$33 million is proposed

for the National Research Initiative, which is open to participation by Federal laboratories, public and private universities, and other institutions or individuals. It is especially important that the Federal Government support this meritorious program of both fundamental and mission-linked research.

The budget includes increases for CSREES and other participating agencies to move forward on the Integrated Pest Management (IPM) initiative. This initiative has the ambitious goal of encouraging the adoption of IPM practices on 75 percent of U.S. crop acreage. The strategy is based on grower-level input in program planning as well as implementation. CSREES is responsible for organizing implementation teams and supporting the research and extension programs needed for these teams to meet their specific pest and commodity problems. The budget request for CSREES Improved Pest Control activities will allow us to support the activities of implementation teams in up to 32 targeted areas. Increases are also proposed for CSREES programs to support registration of minor crop pesticides and to conduct research on pest problems where current pesticides will be unavailable due to regulatory concerns or natural pest resistance. Finally, increases are proposed to expand the current pesticide use survey program. High quality information on the use of pesticides and pest management practices is essential for measuring progress toward increased adoption of alternative pest management practices and for assessing the economic and environmental benefits derived from reduced pesticide use.

I want to emphasize that all four agencies in the Research, Education, and Economics mission area participate in the IPM efforts. ARS conducts research on new and better methods of pest control and on alternatives to pesticides being phased out due to regulatory action. CSREES, as I have just mentioned, with its Land Grant university partners, conducts extensive planning and needs assessments with producers, consultants, agribusiness, and stakeholder groups. The process so far has involved more than 4200 stakeholders, of which 3200 or approximately 75 percent were farmers. Through the CSREES regional IPM competitive grant structure, teams from 23 production areas received grants through the IPM competitive grant process to identify priority research, extension education and technology transfer needs that will allow farmers producing a crop or set of crops under similar conditions to implement IPM on 75 percent of the acreage in that region. The teams represent 44 states and 14 commodities. Applications for these grants exceed the funds available, so we are requesting new funding for fiscal year 1997 through the Smith-Lever 3(d) account for IPM education to fund 16 new proposals next year. Supporting these IPM research, education, and extension efforts are data collection initiatives by NASS and economic analysis of that data by ERS.

The Department conducts several relatively small, but important higher education programs to encourage students to pursue careers in agricultural and food sciences. Efforts are made through these programs to reach out to population groups who are under-represented in many agriculture-related fields to enable all young Americans to have opportunities for successful careers in agriculture. The 1890 Capacity Building Grants program, which is funded at the 1996 level, is the cornerstone of the Department's successful partnership with 1890 Land Grant universities. During 1990 through 1995, over \$53 million was awarded for 261 research and training projects, each of which features an active, cooperative relationship with one or more USDA agencies. We have also encouraged agencies to build on partnership relationships with 1890 institutions to establish centers of excellence, which are on-campus entities devoted to addressing specific USDA agency tasks. The budget also includes a proposal for a new program to reach Hispanic institutions, and funding for the program of grants to 1994 Native American institutions which began last year.

ECONOMIC RESEARCH SERVICE

As farmers are forced to rely more on the market instead of the government to make decisions, it is critical for them to have access to objective and timely information about agricultural markets. Changes in the agricultural sector must also be monitored and policy makers provided with the information and analyses they need to evaluate policy changes. Proposed funding for the Economic Research Service and the National Agricultural Statistics Service (NASS) will be used to maintain and, in some areas, strengthen the collection, reporting, and analysis of agricultural and rural data. More specifically, funding is proposed for an expanded data collection effort that will provide geographically specific information on the economic and environmental performance of American farms. This information is needed in order to more accurately assess at the local and State level the competitiveness of U.S. agricultural production, the performance of farm business, and the profitability of environmentally-friendly production practices.

The Economic Research Service (ERS) provides economic and other social science information and analysis for public and private decisions on agriculture, food, natural resources, and rural America. ERS's major functions are research and data base development, situation and outlook analysis, staff analysis, and development of economic and socioeconomic indicators.

ERS's appropriation request for fiscal year 1997 is \$54.9 million, an increase of \$1.8 million over fiscal year 1996. The increase consists of two parts: \$0.7 million net for pay raises and a reduction in administrative overhead, and \$1.1 million increase for data acquisition and analysis of farm practices and pesticide use linked to environmental conditions and economic performance of farms. The proposed data acquisition and analysis funds will support evaluation of key Department conservation and environmental initiatives and represents an approach to integrating information on farm finances and environmentally friendly production practices that is not duplicative of other Federal initiatives.

The proposed data acquisition and analysis funds will also support ERS's economic analysis of pesticide data, complementing the NASS data collection effort. To support the USDA goal of achieving Integrated Pest Management practices on 75 percent of US crop acreage by the year 2000, economic analysis is needed to establish the profitability and environmental implications of adopting IPM practices appropriate under varying climate, soil and economic conditions.

NATIONAL AGRICULTURAL STATISTICS SERVICE

The National Agricultural Statistics Service continues to serve a critical role in support of American agriculture. As we move into the 1996 planting season, the commodity outlook has more than the usual level of uncertainty. The combination of the new Farm Bill, as well as the tight world stocks of the major grains, oilseeds, and fiber crops, places increased importance on having timely, accurate information for making sound production and marketing decisions by everyone engaged in the agriculture industry. The primary activities of NASS are to conduct surveys which include the collection, summarization, analysis, and publication of reliable agricultural forecasts and estimates. Farmers, ranchers, and agribusinesses voluntarily respond to a series of nationwide surveys about their crops, livestock, prices and other agricultural activities each year. The statistics programs is conducted through 45 field offices servicing all 50 states. Nearly two-thirds of the Agency's staff and resources are located in the field. All State offices operate under cooperative funding and 24 are collocated with their State Departments of Agriculture or land-grant universities.

One of NASS' major initiatives is a broad environmental statistics program supporting the Department's water quality and food safety programs. Until 1991, reliable pesticide usage data was not available. In cooperation with other USDA agencies, the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA), NASS has implemented comprehensive chemical usage surveys. These surveys also collect detailed economic and cultural practice information for the purpose of determining use of Integrated Pest Management Practices (IPM) as well as to analyze the costs associated with different levels of chemical use.

In addition, the proposed budget for NASS includes \$17.5 million to fund the Census of Agriculture, which is proposed to be transferred from the Department of Commerce to USDA in fiscal year 1997. The integration of the Census of Agriculture with USDA's current statistical collection program will streamline Federal data collection activities and enhance the quality of information available about rural America. The consolidation will allow the efficient use of resources to more effectively conduct the Census of Agriculture, which will next be taken in 1998, to improve the current agricultural survey and estimates program. The census, which is taken every 5 years, is critical to the agricultural community, since it measures changes taking place at the local level. Detailed information at the county level helps agricultural organizations, suppliers, handlers, processors, and wholesalers and retailers better plan their operation. Demographic information supplied by the census also provides valuable data for developing public policy for rural areas.

SUMMARY

In summary, I want to reemphasize the benefit and importance of the Federal investment in the research, education, and economics mission area. We are confident that the our ongoing work and our adoption of the Government Performance Results Act principles will enable us to not only establish priorities, but meet the goals to move American Agriculture into the next century. We welcome your questions, and will do our best to provide whatever information the Committee requests to proceed.

PREPARED STATEMENT OF DR. FLOYD P. HORN

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to represent the Agricultural Research Service (ARS). Last year I came here as the Acting Under Secretary for Research, Education, and Economics. This is the first opportunity that I have had to testify before you as the Administrator of the Agricultural Research Service. Joining me is Dr. Robert Reginato, Associate Administrator of ARS.

Mr. Chairman, we appreciate the support that this Subcommittee has provided to agricultural research and to ARS in particular. This Subcommittee is familiar with much of the work of ARS—its mission and its research accomplishments. I know my predecessors, Drs. Plowman and Finney, have reflected on the many products ARS has developed in recent years. Many of these items were examples of ARS accomplishments in applied research and the relationship ARS has achieved with industry in bringing these products to the marketplace for consumer benefit.

ARS is also a leader in fundamental research. I would like to briefly touch on some of ARS' significant contributions in this area.

THE VIROID

ARS plant pathologists William Raymer and Theodore Diener discovered the viroid, a feat comparable to the discovery of bacteria. Like a virus, the viroid invades a cell and hijacks its reproductive mechanisms. It forces the cell to duplicate the viroid's RNA instead of its own.

Potato spindle tuber and at least 15 other crop diseases are caused by viroids. Today, rapid, accurate diagnostic tests are used to keep viroid diseases out of potatoes, tomatoes, citrus, coconut palms, grapes, hops, chrysanthemums, and other crops. For his work, Diener received the Alexander Von Humboldt Award which is presented for the most significant contribution to agriculture during the previous three to five years.

RIBONUCLEIC ACIDS

Robert Holley discovered a class of ribonucleic acids known as transfer RNA's, a basic building block of life. From the original discovery to publication of the first nucleic acid sequence took nine years. Determination of the sequence required Dr. Holley to invent new ways to isolate pure material and to devise innovative means of cleaving the RNA and identifying unusual nucleotides. Dr. Holley was awarded the Nobel Prize in Physiology and Medicine for his work.

PHYTOCHROME

A team of ARS scientists discovered phytochrome, which serves as a biological light switch that controls flowering and other plant functions. Phytochrome molecules act like tiny photoreceptors which sense dark and light and send signals that turn on or turn off plants' activities. Phytochrome's signals can cause seeds to sprout or plants to flower.

It is still unclear where phytochrome resides in cells and how it throws its genetic and behavioral switches in a plant. Researchers today are still opening up the secrets of phytochrome. What may emerge could be new strategies to control weeds; to make better use of a crop plant's preference for certain shades of light; and to use biotechnologies to improve one plant by borrowing the genetic light switch from another. Tomorrow's high-tech plants may well contain phytochrome driven genes that also confer traits, such as improved flavor or higher nutritional value.

"N" GENE

Plants have evolved sophisticated tactics to thwart viruses. Recently, Barbara Baker, a plant molecular geneticist at ARS' Plant Gene Expression Center in Albany, California isolated the "N" gene which may yield clues about how plants fend off their attackers. With additional work that is underway in ARS and other research institutions, this discovery could open the door to new ways for boosting the defense mechanisms of tomorrow's green plants. That, in turn, could reduce growers' and gardeners' reliance on chemical pesticides needed to kill insects that transmit viruses.

BIOLOGICAL CONTROL OF THE SCREWORM

Adult screwworm flies lay eggs in open wounds of live animals. Larvae hatch from the eggs and feed on the living tissue. The larvae which usually feed five to seven days can if unchecked kill an animal. This pest caused an estimated \$100 million

in damage annually to the United States livestock industry in southern States before its eradication using insect control technology developed by ARS entomologists Edward Knippling and Raymond Bushland.

Knippling and Bushland developed the sterile-male-release technique for insect control. The technique involves rearing and sterilizing male insects and releasing them to mate with females. As more and more females mate with sterile males and lay eggs that do not hatch, the overall population shrinks and eventually dies. This basic biological research on ecosystem management has also been applied to solving other pest problems such as boll weevil eradication, fruit fly control, and areawide pest management programs. For their pioneering breakthrough in biological insect control, Knippling and Bushland were awarded the World Food Prize in 1992. Knippling also received the Japan Prize in 1995.

NEW USES OF AGRICULTURAL PRODUCTS

Dozens of products Americans use every day, including orange juice concentrate, permanent press cotton, soy-based ink, instant potato flakes, and biodegradable plastic have been developed by ARS scientists. ARS researchers are also responsible for the development of products such as Oatrim and "Superslurper." Superslurper, a cornstarch derivative capable of absorbing hundreds of times its weight in water, is used in diapers, baby powders, batteries, laundry bags and numerous other products. Oatrim, a fat substitute used in meat, dairy and bakery products, reduces calories and fat and fights blood cholesterol. Oatrim, by the way, is an example of an ARS-developed product which has been commercialized under ARS' Cooperative Research and Development Agreement (CRADA) Program.

CRADA'S

ARS frequently establishes partnerships with companies and other institutions to develop new technologies through CRADA's and patent licenses. These partnerships have dramatically speeded commercialization of agricultural technologies. The old days when new discoveries were published in scientific journals are past. Today the focus is on getting the technology out to consumers as quickly as possible.

ARS has entered into over 550 CRADA's to date. Patents are also an important component of ARS' technology transfer program. Nearly 220 patent licenses are currently in place to manufacture, use and sell ARS developed products and processes.

ARS' NATIONAL LEADERSHIP ROLE

This past year ARS conducted a series of conferences around the country which brought together ARS staff members, customers, partners and other stakeholders to review the role of publicly supported agricultural research in view of economic, technological, scientific, political and social changes. ARS' role in meeting the agricultural research needs of the next 20 to 25 years was examined.

The conferences underscored the importance of ARS and its research. ARS was singled out to continue providing leadership in agricultural research; to support and carry out strong, relevant research; and to focus on long term, high risk research.

ARS LEADERSHIP ROLE IN ACTION

Methyl Bromide

Methyl bromide provides an excellent example of ARS' leadership in agricultural research. Before I discuss ARS' role, I would like to briefly outline the background and importance of methyl bromide.

Methyl bromide is critical to important segments of American agriculture. It is used for soil fumigation, postharvest protection, and quarantine treatments to control various pests on more than 100 crops. Methyl bromide is widely used, from strawberry fields in California to tomato, pepper, and eggplant fields in Florida. It is used to disinfest imported commodities and preserve quality during storage. Washington apples sent to Japan, Appalachian oak logs sent to Europe, and Chilean grapes and stone fruit sent to the United States—all are fumigated with methyl bromide as a condition of importation.

Methyl bromide is also currently the only emergency fumigant available to disinfest commodities from growing areas quarantined as a result of the invasion of exotic pests, such as the Mediterranean fruit fly. If this insect were to invade the San Joaquin Valley in California or the citrus regions of Florida, affected products would not be allowed to be moved from the quarantined area without methyl bromide treatment.

In 1991, the United Nations' Montreal Protocol identified methyl bromide as a chemical contributing to the depletion of the ozone layer. In December 1995, the

U.N. called for the elimination of methyl bromide in industrialized countries by the year 2010. This total phaseout would be preceded by a 25 percent reduction in year 2001 and a 50 percent cut in 2005. Under the Clean Air Act, the EPA has taken a more aggressive stand scheduling the phaseout of the production and use of methyl bromide in the United States by January 1, 2001.

Unless viable alternatives to methyl bromide are found, U.S. farmers will be at a competitive disadvantage in domestic and international markets when the Clean Air Act phaseout takes effect. Developing countries may be allowed to use methyl bromide to produce and market crops long after the United States' 2001 cutoff date. For example, in a report by John Van Sickle, an agricultural economist with the University of Florida, it is estimated that unless methyl bromide alternatives are found, Mexico's production of tomatoes will increase 80 percent; bell peppers, 54 percent; and eggplant, 143 percent to meet U.S. market demand. His report also predicts that tomato production in Florida will decrease more than 60 percent, and suggests that Florida fruit and vegetable growers stand to lose more than \$600 million annually for the winter growing season alone.

ARS has responded to the methyl bromide challenge by redirecting funds from some of its other research programs, and by working with agricultural leaders from private industry, academia, including the Crop Protection Coalition, State governments, and other Federal government agencies to tackle this difficult issue head-on.

It is likely that numerous pest control approaches will be required to substitute for the wide array of uses that methyl bromide presently and so effectively covers. ARS is exploring a number of approaches. For example, ARS scientists are supporting the testing of chemical alternatives on production fields near Watsonville, California. At Fresno and Wenatchee, and at a number of other ARS laboratories, ARS researchers are working on biologically-based alternatives to methyl bromide as a soil fumigant. At Orlando, ARS scientists are studying methyl bromide alternatives for control of nutsedge, a weed that is rampant wherever vegetables are grown. A team of ARS scientists at Beltsville is carrying out research to expand the use of SoilGard and other biological control agents to determine their effectiveness in integrated pest management and sustainable systems as a substitute for methyl bromide.

Silverleaf Whitefly

The silverleaf whitefly also demonstrates ARS' leadership in agricultural research. This year, in San Antonio, ARS hosted a three day symposium on the silverleaf whitefly, a pest of serious economic proportions. Approximately 150 Federal, State, university and industry scientists and officials from around the country were brought together by ARS to discuss and formulate approaches and management strategies, as well as to review the progress in research and technology development for controlling the whitefly.

The symposium was the latest in a series of workshops which have been held annually since 1993. In 1991, ARS established a National Research and Action Plan for the management of the silverleaf whitefly. In 1992, under the leadership of ARS, the whitefly plan was completed and implemented.

The whitefly has existed in the U.S. for more than 100 years. The silverleaf whitefly is a new species which was found in 1987. It reproduces faster and has greater adaptability, diversity, and destructiveness than the common species, which has been displaced by the new species. Since 1991, the silverleaf whitefly has been American agriculture's single most damaging insect pest. It has cost U.S. growers more than \$200 million annually in damage and controls. The silverleaf whitefly attacks cotton, citrus, melons, tomatoes, lettuce, and other vegetable and ornamental crops. Texas' Lower Rio Grande Valley, California's Imperial Valley, Arizona's Maricopa county, and central and southern Florida have been particularly hard hit. If agriculture in these affected areas is to remain productive, this insect must be controlled.

Significant advances have been made by ARS and others to combat the silverleaf whitefly. A number of insecticides have been identified, and a microbial biocontrol agent has been developed which is effective. ARS is also responsible for the development of a new commercial variety of cotton harvested in the U.S. last year which may offer some natural protection against the silverleaf whitefly. The variety, Texas 121, from germplasm developed by an ARS scientist in Weslaco, Texas, matures a week earlier than other varieties of cotton. This allows the crop to partially escape the late season buildup of whitefly populations in south Texas.

Industry has commended ARS' response to the whitefly as the "fastest, most cooperative and productive response seen in years." The Users Advisory Board has singled out the whitefly working group's efforts as an excellent example of research co-

ordination, cooperative interaction, and research implementation to solve a critical national problem.

ARS RESOURCES

ARS is the principal national agricultural research organization in the U.S. in part because of the expertise and resources at its command. ARS must maintain a "critical mass of resources" to effectively carry out its mission, including spearheading and coordinating efforts to mitigate emerging crises such as methyl bromide and the silverleaf whitefly.

When I began my career at ARS in 1970 there were over 3,000 ARS scientists, while today there are less than 2,000 scientists. Increased salary and operating costs are the principal culprits. The cost of supporting a scientist now has risen to approximately \$300,000 per year.

Although the number of ARS scientists has declined, I am proud to report that ARS still represents a beacon of opportunity for current and potential employees regardless of ethnicity, race, color, gender, or physical disability. ARS has been and continues to be the employer of choice for many of America's best and brightest scientists.

FISCAL YEAR 1997 BUDGET

ARS' fiscal year 1997 Budget proposes a funding level of \$726,353,000 which represents an increase of \$16,408,000 over the fiscal year 1996 Appropriation Act. The fiscal year 1997 Budget reflects modest increases for new or expanded initiatives. It also includes reductions and redirections of base resources to fund higher priority research which is necessary to address the Nation's changing research needs.

NEW AND EXPANDED RESEARCH INITIATIVES

ARS is requesting \$29,832,000 for new and expanded program initiatives.

Genetic Resources and Biodiversity (\$2,400,000).—Preservation and utilization of genetic resources and agricultural biodiversity are necessary to ensure that an adequate supply of food and fiber will be available at a reasonable cost in the future. USDA's plant genetic resources collections underpin crop breeding efforts in the United States. In addition, new preservation technologies for many forms of animal germplasm need to be established to prevent the loss of unique animal breeds and outstanding genotypes. The additional funding ARS proposes will be used to preserve plant and animal germplasm.

Alternatives to Methyl Bromide (\$1,000,000).—Methyl bromide has been identified as an ozone depleting compound; its availability is scheduled to be phased out on January 1, 2001. Without suitable alternatives, yearly losses could exceed \$1 billion. To maintain the economic viability of U.S. producers and to enhance our global competitiveness for export of affected crops, alternative management techniques are needed that do not damage the environment or pose health threats to workers or consumers. For alternatives to soil fumigation with methyl bromide, research needs to be expanded to develop integrated pest management strategies based upon host plant resistance to insect pests and diseases, biological control of disease-causing organisms, cultural practices that reduce loss to pests, and physical and chemical soil treatments that reduce pest populations.

Food Safety Research (\$7,500,000).—Food safety is a major concern of consumers and a top priority of ARS. The Department is committed to providing consumers with wholesome and safe meat and poultry products. The increased concern with human pathogens carried by meat and poultry and their products has dictated that microbial control start with the producer and that new methods be developed to prevent such contamination. Small numbers of microorganisms on carcasses which cannot be readily detected during slaughter and processing can quickly multiply to numbers which are hazardous to human health. The proposed increase will be used to develop rapid diagnostic and detection methods, intervention strategies, risk assessment technologies, and production systems to identify and control pathogens.

Integrated Farming Systems (\$3,500,000).—Over the past several decades the agricultural industry has moved toward specialization, leading to fewer and less complicated crop rotations, separation of crop from livestock production, and separation of livestock production from the land. This change which has increased production efficiency appears to be associated with larger and fewer farms, greater dependence on purchased inputs, degradation of natural resources, and weakening of rural communities. Research needs to be conducted to determine if greater dependence on management skills, and reduced use of purchased inputs can lead to farming systems that are equally efficient, do not depend on growth in size for survival, and

manage the natural resource base more effectively, resulting in a more sustainable agricultural system.

Biomass for Electricity Generation (\$2,000,000).—During the past year, USDA and the Department of Energy have worked with the Office of Science and Technology Policy to develop a bioenergy initiative. One component of this initiative is the use of biomass to generate electricity. Improved energy crops will expand economic opportunities for farmers, create new jobs in rural communities, and enhance environmental quality and energy security. The proposed research will focus on improved plant genetic materials, sustainable production technologies, and harvesting and handling technologies.

South Florida Ecosystem Restoration (\$2,000,000).—On September 23, 1993, a 5-year Interagency Agreement on South Florida Ecosystem Restoration was signed by the Departments of Interior, Commerce, Army, Justice, and Agriculture, and the Environmental Protection Agency. This agreement established a task force for coordinating the development of consistent policies and programs for addressing the concerns of the south Florida ecosystem. The Department's responsibility is to develop technology for maintaining current agricultural production levels with zero soil subsidence in the Everglades Agricultural Area. Also, USDA and the Department of Interior have responsibility for conducting research and developing comprehensive management plans for control of harmful nonindigenous species. The proposed increase will be for biological control of aquatic weeds, and identification of sugarcane germplasm to improve sugarcane yield and assessing its tolerance to high water tables.

Waste Utilization Management (\$2,000,000).—Animals in intensive production facilities have created public concern about the human health and environmental hazards posed by animal wastes. Disposal costs also continue to rise. The development of improved waste management technologies is a top priority of the Department. The proposed increase will be used to develop new animal and industrial waste applications to meet crop needs and enhance environmental quality.

Binational Agricultural Research and Development (BARD) (\$2,500,000).—An agreement between the U.S. and Israel governments to establish a Binational Agricultural Research and Development (BARD) fund was signed in 1977. Its purpose was to foster greater cooperation between the two scientific communities for their mutual benefit in advancing agriculture. The funding ARS recommends in its fiscal year 1997 Budget will supplement the interest from the BARD endowment, which has declined in the last two years along with interest rates, and will be made available for competitive grants for joint U.S.-Israel agricultural research projects. U.S. agriculture benefits greatly from these activities, particularly in the areas of efficient food production in arid and other environmentally stressed regions. The additional funding will be matched by the Government of Israel and will support all aspects of agricultural research within the mission of ARS.

Biocontrol of Pests and Soil Biology (\$2,000,000).—Successful integrated pest management requires development and adoption of effective biological control agents and cultural practices to minimize damage from agricultural pests, along with close monitoring of pest populations to avoid overuse of other, more dangerous, control measures (i.e., hard chemicals). Biocontrol strategies depend upon predators, parasites, and pathogens to keep species in check. Research will be conducted on soil and crop management and biocontrol practices that foster sustainable production systems, decrease the need for inputs, and reduce reliance upon chemical pesticides.

Integrated Pest Management (\$4,932,000).—Cost-effective, pest control remains one of the most important aspects of agricultural production systems. Societal concerns with environmental protection and food safety have given rise to the need for strategies that minimize chemical pesticide use. Use of chemicals with broad toxicity has also produced pest resistance and loss in treatment effectiveness. An enhanced research program is proposed in coordination with CSREES and other agencies to provide the technology to meet the Administration's goal for IPM implementation on 75 percent of the Nation's croplands by the year 2000.

ARS is also recommending \$14,500,000 to finance the anticipated fiscal year 1997 Federal pay raises and associated costs.

PROJECT TERMINATIONS AND GENERAL REDUCTIONS

The fiscal year 1997 Budget recommends \$27,924,000 in research and operational reductions. Of this total, ARS proposes \$20,000,000 in specific project terminations and general reductions to finance higher priority program needs. ARS also proposes \$7,924,000 in reductions for administrative overhead to support the Administration's continuing efforts to reduce overall expenditures.

BUILDINGS AND FACILITIES

The modernization and replacement of ARS' major research centers and laboratories is a high priority effort within USDA. Continuing the renovation and modernization of these facilities is critical if the Agency is going to carry out the vital research programs that will benefit the Nation's economy, environment, and human well-being, and attract and retain the best scientists.

ARS' fiscal year 1997 budget recommends under its Building and Facilities account a total of \$80,100,000 for the following projects:

Beltsville Agricultural Research Center, Beltsville, Maryland (\$4,500,000).—The Center is recognized as one of the largest agricultural research centers in the world with a long history of contributions to American agriculture. Funding will finance the design of a new Human Nutrition Research Center, and various modernization projects of BARC.

Western Regional Research Center, Albany, California (\$4,600,000).—The Center conducts priority research primarily in food safety, and new uses. Additional appropriations are needed to proceed with the phased modernization program. The funding will be for phase 7, involving renovation of laboratories, upgrading electrical and fire safety systems, and other site improvements.

Eastern Regional Research Center, Philadelphia, Pennsylvania (\$4,700,000).—The Center conducts critical research on new uses for farm commodities that leads to the development of new markets at home and abroad. A facility condition study indicated that the utilities and building infrastructure have reached the end of their usefulness. A modernization program was divided into 9 phases. The proposed funding will be used for construction of phase 3 of the Chemical Wing Laboratory.

National Center for Agricultural Utilization Research, Peoria, Illinois (\$1,500,000).—The Center performs vital research on new agricultural uses and food safety. Funding will be for continuation of the facility modernization program, specifically construction of the North Wing, Phase 1.

Plum Island Animal Disease Center, Greenport, New York (\$5,000,000).—Plum Island conducts state-of-the-art research on foreign animal diseases which are an ongoing threat to the U.S. It is the only site in the U.S. authorized by Congress to carry out such research. Funding will be for the continuation of the modernization of the Center, and correction of major environmental, mechanical, electrical, architectural, and structural deficiencies.

U.S. Horticultural Crops and Water Management Research Laboratory, Parlier, California (\$22,000,000).—The proposed funding will be used to finance the construction of a replacement laboratory in Parlier. The U.S. Horticultural Crops and Water Management Research Laboratory which solves problems related to western production and postharvest agriculture is currently in Fresno. New housing developments and a new school planned to be built one quarter mile from the laboratory has placed restrictions on agricultural spraying and made the present site unsuitable.

Horticultural Research Laboratory, Ft. Pierce, Florida (\$29,800,000).—The proposed funding will be used to finance the construction of a replacement laboratory in Ft. Pierce. Presently, the Horticultural Research Laboratory is located in Orlando. Built in 1952, the present laboratory is surrounded by commercial and residential properties. The encroachment prevents normal expansion and modification of the facilities, and has resulted in the curtailment of certain research activities.

Subtropical Agricultural Research Laboratory, Weslaco, Texas (\$4,000,000).—The laboratory performs research on food and fiber production, and on the protection and preservation of commodities after harvest. It is located in the Lower Rio Grand Valley, one of the most important agricultural areas in the Nation. Many of the laboratory's facilities are obsolete, inefficient or unsafe. Funding would enable ARS to continue implementation of a six-year plan for modernizing and improving the laboratory's facilities and closing or replacing obsolete buildings.

Melaleuca Research and Quarantine Facility, Ft. Lauderdale, Florida (\$4,000,000).—The exotic weed tree *Melaleuca quinquenervia* covers tens of thousands of acres of south Florida's fragile wetlands. This plant pest cannot be controlled without the aid of biological control insects from Australia. These insects must be tested and held in a quarantine facility before their release to ensure that they do not pose a threat to native Florida species and environment. Funding will finance construction of a biological quarantine facility, an important link in the Administration's Everglades Restoration initiative.

CLOSING REMARKS

Mr. Chairman, these past few months have passed quickly since my appointment in October as the Administrator of ARS. As a former ARS research scientist and

now as the Administrator, I am impressed more than ever with the talent and dedication of the employees of this Agency.

With the resources, expertise, and experience ARS has, it can solve the vital problems that confront American farmers and consumers as we approach the 21st century. ARS can bring the most advanced research and technologies to bear on the emerging and long-term challenges that face American agriculture. It can coordinate research and collaborate with other government agencies and the private sector to respond quickly and effectively to emergencies, such as the silverleaf whitefly and the need for methyl bromide alternatives. And it can support its sister agencies who rely on research to carry out their regulatory responsibilities.

I believe that ARS today is the principal national agricultural research organization in the United States—an organization which promotes an agricultural research agenda which responds to the changing agricultural needs and protects the public interest. This concludes my prepared remarks.

PREPARED STATEMENT OF DR. B.H. ROBINSON

Mr. Chairman, and Members of the Committee, I appreciate the opportunity to appear before you to discuss the fiscal year 1997 President's Budget Request for the Cooperative State Research, Education, and Extension Service. Since this is my first appearance before your subcommittee since being appointed Administrator of CSREES, I would also like to take this opportunity to share with you the rich heritage of the CSREES partnership and my vision for its future.

CSREES PARTNERSHIP

The organization created by the merger of the Cooperative State Research Service and the Extension Service has resulted in a unified, dynamic Federal agency which brings together research, education and extension components within CSREES and within the Research, Education, and Economics mission area. CSREES programs and services span a broad continuum from the generation of new knowledge through fundamental research, teaching and transfer of research results, and implementation and adoption of new agricultural practices arising from these activities. As we begin the second year of operation under this new organization, we are moving toward a more productive linkage between research, education and extension.

CSREES is the USDA partner with the Nation's vast university knowledge system capable of addressing issues of importance to citizens in every county of this country. The Federal-State-private partnership which made U.S. Agriculture the envy of the world is enhanced by this dynamic new agency.

CSREES is also the Federal Government's lead agency for higher education in the food and agricultural sciences. Through higher education programs, USDA supports and encourages efforts aimed at providing a continual flow of trained scientists required by the Nation's modern, high-technology, knowledge-based food and agricultural system. These programs have stimulated a host of public and private sector partnerships that are helping to solve problems that transcend the ability of individual institutions to solve.

The mission of CSREES is to work with its partners and customers to advance research, extension, and higher education in the food and agricultural sciences and related environmental and human sciences to benefit people, communities, and the nation. Through interdisciplinary teamwork and collaboration with the public and private sectors, CSREES strives to achieve significant improvements in economic, educational, environmental, and social conditions at the local level, nationally and globally.

The partnership between USDA and the university based research and education system is forged through CSREES. We cooperate with the 59 State and Territorial Agricultural Experiment Stations; the 17 1890 land-grant institutions, including Tuskegee University; the 63 Forestry Schools; the 27 Colleges of Veterinary Medicine in the United States; 42 Schools of Home Economics and the 29 Native American Institutions. In addition to land-grant universities, CSREES has partners in virtually all segments of the agricultural community including private and public colleges and universities, Federal laboratories, private industry, state and local governments and entities and private individuals. These relationships bring together a vast infrastructure of individuals to address national and international research and education issues in partnership form.

Our State partners for Extension programs are the Cooperative Extension Services at the land-grant universities. Together with CSREES, they form a publicly funded, informal, educational system that links the education and research resources and activities of the U.S. Department of Agriculture, 74 land-grant univer-

sities, and 3,150 county and city administrative units. This infrastructure is supported by Federal, state, and local funding, with CSREES being the Federal component of the system. The broad list of CSREES partners assures that the best and most diverse array of talents are brought to bear on problems facing agriculture.

The changing face of agriculture has further broadened the programs CSREES has developed and the clientele we served. While the size and intricacies of the agency have grown, CSREES continues to function on extremely low administrative costs. About 3.7 percent of the 1996 appropriation will be used for Federal Administration costs. This means that the agency functions effectively on a very small portion of an annual appropriation of more than \$800 million, making maximum program funds available to the American public through our partner institutions.

VISION FOR CSREES

Along with our partners at the state and local levels, we are continuously renegotiating the social contracts that we have with the American public in the areas of research, education, and extension. While there are indications of dissatisfaction with government and public service, we believe our programs are generally highly regarded by our clientele. In our judgment, the close relationships the entire system has with state and local taxpayers and their representatives at the Federal level is a major reason we understand and respond to changing needs as well as we do. Therefore, we view the implementation of the 1993 Government Performance and Results Act (GPRA) as an opportunity to engage in a more systematic but not fundamentally different approach to determining program needs, focusing on outcomes, and holding ourselves accountable for accomplishments.

First, research, extension, and education must be relevant to what's going on. We need to encourage internationalization and diversity in research, education, and extension to position agriculture for a changing future. I believe that we are up to the task. The leadership provided to the System through the partnership has been a model of success producing rapid technological change and increased productivity in U.S. agriculture. Now we must address a more diverse and complex social and scientific agenda. We are positioned to once again serve as a model of applying science and information to changing problems in an uncertain world. Second, we must strive for excellence, be on the frontier; be viewed by others as being out front—to advance research, education, and extension, and to provide information critical to addressing current and emerging problems and issues. Third, what we do must be useful—we must develop products useful to those who need them and be adaptable to solve current and emerging problems.

To inspire useful outcomes of our effort, I have challenged CSREES staff to work together as a team. We're no longer the old CSRS or ES, but are now a new dynamic Agency. We must be interdisciplinary and interfunctional, leave the old way of operating behind and move toward the new.

FISCAL YEAR 1997 BUDGET REQUEST

Mr. Chairman, I would now like to highlight the fiscal year 1997 budget request.

The budget submitted to Congress by the President requests \$842,060,000 for the Cooperative State Research, Education, and Extension Service. This is a decrease of \$65.5 million or approximately 7.2 percent from the current appropriation. The budget reflects our judgment of the optimum combination of programs and activities at this total funding level that is consistent with the 5 objectives of the REE mission area—1) an agricultural production system that is highly competitive in the global economy; 2) a safe and secure food and fiber production system; 3) healthy and well-nourished children, youth and families; 4) greater harmony between agriculture and the environment; and 5) enhanced economic opportunity and quality of life for citizens and communities.

PROPOSED INCREASES

CSREES continues to focus on the USDA Initiative for Integrated Pest Management by requesting an increase of \$17 million over the 1996 level for Integrated Pest Management, Pesticide Clearance and Emerging Pest and Disease Issues. These programs are major components of the Department's strategic plan for IPM which calls for implementation of IPM practices on 75 percent of U.S. crop acreage by the year 2000. The IPM Initiative sets an ambitious goal for USDA research and education programs to increase field adoption of IPM practices that enable farmers to achieve both economic and environmental objectives. The Initiative establishes a system that empowers state and local teams of growers, researchers, crop consultants and others to set priorities and expand the emphasis on the integration of pesticide use to reduce dependency on pesticides.

To meet these priority needs for research and education, we are expanding the IPM competitive grants program that is administered by states to make sure that the necessary tools are delivered for growers to use in producing their crops.

Through the research on alternatives pesticides we are also making sure that, in places where producers are losing pest management tools to regulation or pest resistance, USDA is supporting the necessary research to develop new tools that are of critical importance to farmers. The competitive research grants program on alternatives, as part of the MOU between USDA and EPA, will ensure that new technology is available to farmers to meet pressing grower needs and that EPA will quickly respond to the research data developed by USDA in seeking potential alternatives.

An increase of \$33.3 million is requested for the National Research Initiative to realize the goals set forth by the Administration and National Science and Technology Council to increase Federal support for fundamental science. This will help to insure the long term health of American and world agriculture, and to address national priorities in the areas of environment and natural resources, health, safety and food. A major public investment in fundamental research is required to obtain the knowledge base specifically needed for agriculture which is unlikely to be done by the private sector. Funding research grants awarded on a competitive basis and merit reviewed by peers is uniquely suited to stimulating new research activity in specific high priority areas.

A new USDA-Hispanic Education Partnerships Grants Program is proposed for funding at \$1.5 million. This program will be the foundation for USDA efforts to better serve Hispanic Americans and prepare them for careers in the agricultural sciences and agribusiness.

With regard to better ensuring accountability of our REE programs, we have a very special need. USDA's Current Research Information System (CRIS) was established in the late 1960's as a data base on agricultural research conducted by or through USDA agencies and their university cooperators. CRIS presently contains data on over 35,000 current or recently completed projects. Despite this broad coverage of research, CRIS is constrained by outdated technologies, a taxonomy that does not include recently emerging areas of science, and an inability to provide comprehensive program data in addition to individual project data. The system cannot adequately identify current and emerging national issues. Currently, USDA and the REE mission area and its university partners lack an integrated, user-friendly electronic data system to serve as an inventory of the thousands of research, education, and economics programs and projects supported with Federal funds. Such a system is critically needed to minimize duplication of effort in agricultural research and education program development and to provide current, accurate, comprehensive information to facilitate rapid in-depth policy assessment and evaluation analyses for management of research, education and economics programs and projects. In addition, gathering needed information for compliance with the Government Performance and Results Act has required new and expanded reporting demands that current decentralized information systems are not adequate to satisfy. Even though the best available research information system is CRIS, there is still a great need to enhance CRIS to serve as a bridge to a more comprehensive Research, Education, and Economics Information System.

An increase of \$0.5 million is proposed to begin the REE information system. CSREES on behalf of the REE mission area, will take the lead in exploring the development of a comprehensive integrated research, education, and economics information system for use by USDA agencies and their partner institutions.

SUSTAINED FUNDING SUPPORT

The State-Federal partnership in food and agricultural research, education, and extension has benefited both American consumers and the agricultural industry and merits continued strong support. The Hatch, McIntire-Stennis, Cooperative Forestry, Smith-Lever, and the Animal Health and Disease Research formula based programs are proposed for funding at 1996 levels.

The Department continues to focus efforts on helping small-scale and minority farmers and other limited resource audiences. Funding is maintained at the 1996 level for extension programs at 1890 Institutions, the Evans-Allen formula program, the 1890 Institutions Capacity Building Grants program, and the 1890 Facilities program.

The fiscal year 1997 Budget proposes continued support for those Special Research Grants that concentrate on problems of national and broad regional interest beyond the scope and resources of the formula based program. Funding is maintained at the 1996 level for global change, minor use animal drugs, national biologi-

cal impact assessment program, rural development centers, water quality, and pesticide impact assessment. Other research grant programs such as the Rangeland Research Program, Aquaculture Centers, Sustainable Agriculture, Research and Education, and Supplemental and Alternative Crops are also funded at the 1996 level.

Funding is also maintained at the 1996 level for Smith-Lever 3d programs such as Rural Development, Water Quality, the Expanded Food and Nutrition Education Program, Youth and Families at Risk, Sustainable Agriculture and Pesticide Impact Assessment.

Recognizing that education is the lever that can move this nation successfully into the 21st century, CSREES supports a soundly integrated portfolio of higher education programs which advance USDA's role in promoting excellence in education. Our programs complement and build upon one another and are strongly endorsed by the Office of Science and Technology Policy. Funding at the 1996 level is proposed for higher education programs including the National Needs Graduate Fellowships Program, Institution Challenge Grants, Multicultural Scholars Program, Tribal Colleges Education Equity Grants Program and the Tribal Colleges Endowment Fund.

PROPOSED DECREASES

As part of the Administration's efforts to reduce lower-priority spending, the Budget Request proposes eliminating \$42.7 million in funding for Special Research Grants, \$14.9 million for earmarked special projects with the Federal Administration line items for research, education and extension, and \$1.96 million for AgriAbility projects which could be done by the States. These programs are state specific and do not address broader regional or national priorities. In keeping with the Administration's policy of awarding research and construction grants through a competitive merit-reviewed process, no funding is proposed for the Research and Education, Buildings and Facilities program. The \$57.8 million appropriated in 1996 was earmarked for specific institutions.

PROGRAM ACCOMPLISHMENTS

American agriculture is among the most efficient in the world and remains a mainstay of this country and much of the world as a source of food and fiber. One reason for this success is the agriculture and forestry research, higher education, and extension systems created with the beginning of the land-grant system in 1862. This system fostered a partnership in science and education to serve all the individuals by addressing local, regional, and national agricultural issues. The cooperative research and extension systems have yielded significant improvements in agricultural productivity, created new products, protected animal and plant health, improved nutrition and health of humans, and increased human capacity to respond to changes and opportunities. These developments have enhanced our standard of living and provided a wide variety of food and fiber at reasonable prices.

Although there are numerous examples of CSREES accomplishments, I would like to share with you five which are representative of outstanding research, education, and extension activities.

RESEARCH ACTIVITIES

Root Knot Nematode Research.—One of the primary purposes of the National Research Initiative (NRI) Competitive Grants Program is to support basic research that will open up new directions in applied research for agriculture. For example, a discovery by scientists at North Carolina State University and funded by the NRI has opened an entirely new approach to manage root knot nematodes and possibly other kinds of parasites of crop plants. Nematodes that live in the soil do an estimated \$8 billion in damage to U.S. crops each year. They are one of the major kinds of pests currently managed by soil fumigation, including soil fumigation with methyl bromide. The research funded by the NRI has discovered how root knot nematodes cause the roots they invade to change form and direct nutrients to the nematodes. The scientists have discovered that the invading nematodes turn on a kind of genetic switch in the roots, possibly by proteins in their saliva, and it is this genetic switch—the plant's own gene—that then directs the root to supply nutrients to the nematodes. Scientists have been able to create tomato plants with this gene oriented backwards, in what is called the antisense orientation. Root knot nematodes are still able to invade these roots, but the roots remain unchanged and the nematodes starve. In other cases, scientists have spliced to the genetic switch, a new gene for production of a substance to kill the invading nematode. The substance toxic to the nematode is produced precisely when and where needed in the root tissues and without contaminating the soil. The development of crop plants with resistance to

pests is one of the major components of integrated pest management. The fundamental knowledge of how root knot nematodes parasitize roots opens an entirely new approach to developing varieties of crop plants with genetic traits to defend themselves against these pests, which affect cotton, peanuts and many other crops in addition to tomatoes.

Aseptic Processing of Food Products.—Purdue University in Indiana is known in the industry for innovative scientific breakthroughs in the area of aseptic technology. Research conducted in the Food Science Department has revolutionized the technology, the industry, and the way foods are processed, packaged, stored, and distributed around the world. The first full-scale operation was for the storage of tomato juice in 1973. A more recent development has been the large scale tank storage (250,000+ gallons) of "not from concentrate" orange juice. Research contributed to developing the process, valves, filters, sterilization equipment, and transferring systems. The aseptic technology was adapted to portable units from tank trucks to a unique 3.2 million gallon aseptic tanker ship. Aseptic bag-in-box packaging was further developed in the Purdue program. These developments have resulted in reducing the seasonal dependency which once limited processors of liquid food products who have to deal with narrow harvest times and provided more flexibility for processors to choose the final product form in order to more accurately supply demand. This technology has provided an inexpensive packaging system which has become an essential element to effective food distribution around the world, including developing nations.

EXTENSION ACTIVITIES

Soybean IPM.—In Illinois, IPM research and extension education programs helped producers eliminate the use of pesticides to control one of the state's most destructive soybean diseases, the soybean cyst nematode. The savings to Illinois soybean producers are estimated at more than \$23 million per year.

Agricultural Databases for Decision Support (ADDS).—Extension educators have used a variety of information and communication tools over the years to facilitate their work with agricultural producers and other clientele. The advent of microcomputers, the Internet, CD-ROM, database management software and other communication developments have made possible a whole new approach to classroom and Extension education.

A series of national cooperative projects under the umbrella of Agricultural Databases for Decision Support (ADDS) are now underway. These projects are developing world-class knowledge-based resources. The databases bring the best science-based knowledge from the land-grant university system to farmers, ranchers and growers as well as to those who work with these producers in an educational, consultative or service capacity. Teachers and researchers also work with these projects and are users of these databases. ADDS databases are published on CD-ROM with selected files available on the World Wide Web.

These projects are interdisciplinary and their development is coordinated through an informal national agricultural database laboratory at the University of Wisconsin. This coordination allows the several projects to share materials and resources, including educational resources. It also results in each project using the same search and retrieval software, organization of materials, and distribution mechanism. This will allow users to be trained in the use of any one of the databases and feel comfortable using any of the others. A National Dairy Database and a National Pig Information Database are currently available. Additional projects are underway for the sheep, beef, and goat industries, with the National Sheep Database due for a 1996 release. Projects in the planning stage are fresh water aquaculture, marine aquaculture, alfalfa, horticulture, and poultry.

Each project is under the control and direction of a national planning committee and uses editors from all appropriate disciplines throughout the country. The pig and sheep projects are also being conducted in cooperation with the respective national producer organizations and each has received partial private sector funding support.

HIGHER EDUCATION

Higher Education Challenge Grants Program.—Resulting from discussions in 1990 among members of the Biological Engineering Task Force of the American Society for Engineering Education/Biological and Agricultural Engineering Division (ASEE/BAED), an idea for a Higher Education Challenge Grants Program proposal was formulated in 1990 with objectives to produce (1) a consensus statement of the general characteristics expected of graduates from curricula which purport to prepare students to participate in engineering practice related to the Nation's food and agricul-

tural sector, (2) a prioritized listing of the capabilities of these graduates, and (3) outlines of typical core courses consisting of transferable modules of topical subjects needed to develop the competencies of these engineers.

A project at the University of California, Davis, funded under the Challenge Grants Program, was accomplished through two national workshops that were attended by faculty from 21 universities in the United States and Canada. In the first workshop, participants reached consensus on the set of basic competencies needed by students in biological engineering. Following this workshop, groups of faculty (including many who did not attend the workshop) were invited to develop outlines of core courses, consisting of modules of topical subjects, encompassing the basic competencies. The modules were designed to be transferable among courses and universities to meet specific needs for curricular emphases. The second workshop was held to review the courses and to consider how the courses fit into the developed curricula. The workshops resulted in a list of six core courses for biological engineering. Evidence exists to suggest that this developmental project has made a substantial impact on the Nation's food and agricultural sciences higher education system.

There are many other examples of relevant, excellent, and useful research, education, and extension programs supported through the Cooperative State Research, Education, and Extension Service. I believe the budget submitted by the President, which focuses on critical issues in Agriculture will expand the contributions of university-based programs to sustain the most successful agricultural system in the world.

This concludes my remarks, Mr. Chairman. I will be happy to respond to any questions from the Committee.

PREPARED STATEMENT OF SUSAN E. OFFUTT

Mr. Chairman and members of the Committee, I am pleased to appear before you to discuss the proposed fiscal year 1997 budget for the Economic Research Service.

MISSION

The Economic Research Service provides economic and other social science information and analysis for public and private decisions on agriculture, food, natural resources, and rural America. ERS's major functions are research and data base development, situation and outlook analysis, staff analysis, and development of economic and socioeconomic indicators.

BUDGET

Fiscal year 1996.—ERS's appropriation for fiscal year 1996 is \$53.1 million, down 1.5 percent from fiscal year 1995. In response to earlier budget cuts, ERS implemented a streamlining strategy that reduced its staff to a level that could support \$53-million program. The agency has had a hiring freeze in effect for the past 3 years and has made full use of early-out and buy-out authorities—over 100 employees have availed themselves of one or both opportunities and resigned or retired between October 1994–February 1996. As of March 1996, ERS is within its employment ceiling of 620 full-time equivalents.

Fiscal year 1997.—The agency's request for fiscal year 1997 is \$54.9 million, an increase of \$1.8 million over fiscal year 1996. The increase consists of two parts: a \$0.7 million net increase for pay raises net a reduction in administrative overhead, and \$1.1 million for data acquisition and analysis of farm practices and pesticide use linked to environmental conditions and economic performance.

Under the proposed data acquisition program, ERS would collaborate with NASS to design and conduct a survey, and then use the data collected to do an economic analysis that relates farm financial conditions with data on adoption of environmentally-sensitive production practices. A significant contribution of this integrated approach would be greater detail about different regions, important because both production practices and environmental sensitivity vary with geography. Linking farm financial data with data on adoption of conservation farming methods will provide the basis for conducting research on the relative profitability and the economic and environmental effects of adoption of alternative production practices. This survey approach also provides for improved ability to link these data with resource data from the National Resources Inventory (NRI) and other geophysical data. Evidence suggests that variation in resource conditions is an important predictor of the profitability of different practices. Establishing a linked data set of economic conditions, farming practices, and resource and environmental conditions will provide a much sounder basis for USDA conservation and environmental policies.

The proposed data acquisition and analysis funds for developing an integrated survey will also support greater accuracy and resolution in ERS's data on farm finance and economic conditions. While providing more useful and detailed data, development of an integrated survey will reduce respondent burden by reducing the number of different survey instruments needed to collect the data.

With the proposed data acquisition and analysis funds, ERS will also support economic analysis of pesticide data. This support will provide for analysis of data whose collection is already included in the fiscal year 1997 NASS program, thus complementing the NASS data collection effort. USDA, EPA, and FDA have committed to reducing pesticide use in agriculture as a means of improving the environment and reducing health risks for the U.S. population. USDA has set the goal of providing the research and educational efforts required to assure adoption of Integrated Pest Management (IPM) practices on 75 percent of U.S. crop acreage by 2000. Economic analysis is needed to establish the profitability and environmental implications of adopting IPM practices appropriate under varying climate, soil, and economic conditions. Such analysis will support the Department's efforts to provide effective education and understand the challenges researchers face in developing practices that are economically attractive to farmers. Analysis will also be critical to monitor progress toward Departmental goals of expanded use of IPM, reduced use of chemicals, improvements in the environment, and reduced health risks.

The proposed data acquisition and pesticide data analysis program would complement, but is distinct from, initiatives for surveying pesticide use alone that are included in the fiscal year 1997 NASS program. A significant portion of the funds would support data collection on farming practices other than pesticide use that affect resource conservation and the environment. Proposed ERS funds for pesticide data will specifically focus on analysis of data collected by NASS.

In streamlining, the Agency has eliminated lower priority programs and focused its resources on the highest priority outcomes of the Research, Education, and Economics mission area: better service for farmers; enhancing our competitive position in the global marketplace; making rural development a priority; elevating food, nutrition, and consumer services; improved harmony between agriculture and the environment; and ensuring food quality and safety. Let me discuss for a minute what the Agency is doing now and some of its plans for fiscal year 1997 in these areas.

BETTER SERVICE FOR FARMERS

Markets work best if all market participants have equal access to good economic information. The Economic Research Service is the American farm sector's main source of economic information and analysis. ERS data and analysis of economic conditions, domestic and foreign market prospects, and farm income and financial conditions—information important to private decisionmaking—flow to farmers, agribusiness, and the public via about 20 different "outlook" products. These products range from popular periodicals, such as *Agricultural Outlook*, to regular outlook reports on major commodities, major foreign competitor regions, and specialized topics important to farm operators, such as farm income and finance. ERS is converting some hard copy commodity reports to electronic newsletters that are released immediately after the release of USDA's *World Agriculture Supply and Demand Estimates*. The electronic newsletters provide more timely and useful analyses to users and save taxpayers money, in dissemination cost.

ERS outlook reports complement other Departmental publications. While other reports provide data and forecasts, ERS reports explain the major economic factors influencing departmental estimates, present basic industry information and analysis, and pull together data in a consistent and comparable form from many sources.

The material from outlook publications and releases is widely used by State Extension staff, news services, the farm press, private advisory services, and other organizations serving farmers. These users either reprint the material or interpret its relevance to local conditions and specific farm decisions. Thus, ERS is a major "wholesaler" of information and analysis to the food, farming, and rural constituents.

Sales of a significant share of U.S. farm production depend on competing successfully in international markets. And with the implementation of NAFTA and GATT agreements these are times of major change for international markets. The focus of the Agency's international market and country analysis is on gaining an understanding of the major foreign economic and political events likely to affect U.S. agricultural trade in the next several years. Such information can help the U.S. agricultural sector position itself to make better longer-run investment decisions. For example, the Agency is examining the market and trade implications of the political and economic restructuring taking place in the former Soviet Union and Eastern

Europe; revisions in the European Union's farm policies; the rapid economic growth in China; and the shift to market economies by many developing countries. ERS analysts are also considering the trade implications of other countries' food safety and environmental policies, which could emerge as significant nontariff barriers to expanded trade.

Situation and outlook information is most useful when it is timely, so ERS is using new technologies to achieve easier and more cost-effective user access to the Agency's information. The electronic data products program has offered data bases on personal computer diskettes since 1986, but now offers the same data on a CD-ROM and on the Internet. Through the Internet, many extension agents around the country and over 15 million other users, including an increasing number of farmers, have free desktop access to 7,000 ERS data files and, soon, to outlook reports. For users with fax machines, ERS provides an autofax system for 24-hour access to fact sheets, outlook summaries, and similar documents.

MAKING RURAL DEVELOPMENT A PRIORITY

ERS's rural development research provides information and analysis on the conditions affecting people, communities, institutions, and enterprises in rural America. ERS analysis can help decisionmakers develop policies that encourage market-driven economic development and increase the well-being of rural people.

ERS contributes to policy and program debates relating to rural people by analyzing their changing settlement patterns, family structures, skills, jobs, and economic well-being, and interpreting current and possible future trends in light of broad economic forces and Federal policies. To gain a better understanding of the transformations that are occurring in the rural economy, ERS monitors the changing structure and performance of farm and nonfarm industries including the economic linkages among industries and regions. And ERS's studies of key financial, public, and other services that influence rural economic development underpin analysis of the effects of major changes in Federal spending, regulations, and tax policies.

ERS provides its rural development research findings directly to policy officials and program managers through staff analysis and two core periodicals. *Rural Conditions and Trends* provides policy officials and rural practitioners with a synthesis of rural economic and demographic trends. *Rural Development Perspectives* presents results of research on various aspects of rural life that are important to consider in formulating rural policies and programs. ERS creates and maintains extensive data bases that facilitate rural analysis. These data are used for virtually all large-scale empirical analysis of U.S. rural development issues conducted throughout the country. Those who wish to use these can easily gain access to them through the Internet using USDA-ERS gopher located at Cornell University.

ERS will be initiating new research activities that are designed to enhance knowledge of how Federal actions affect the rural economy. The Federal Government spends billions of dollars each year on credit programs to assist rural households, farmers, nonfarm businesses, and local governments acquire capital for various purposes. In order to assist policymakers in assessing a wide range of positions and proposals on rural and agricultural finance, ERS will prepare a series of reports dealing with such current and emerging issues as the impact of interstate banking on rural credit availability, the changing roles of the Farm Credit System and Farmer Mac, beginning farmer financial assistance programs, and potential innovations in the delivery of financial assistance for rural development. In order to expand job opportunities in rural America, rural businesses must be able to effectively compete in the emerging global market. Manufacturing employs 2 to 3 times as many rural people as agriculture, forestry, and fishing combined and is the focus of many USDA, other Federal, and state rural economic development programs. ERS will initiate research to measure and analyze the gap in technology use and productivity of rural versus urban manufacturing establishments, and identify barriers to rural employment expansion in manufacturing. This work is intended to help provide Federal, state, and local leaders with more information about ways to assist rural manufacturers.

ELEVATING THE FOOD, NUTRITION, AND CONSUMER SERVICES PRIORITY

ERS has conducted analyses of food markets and consumer behavior for several decades, monitoring the availability of food based on commodity supply and use information, estimating demand for food by different income and demographic groups, analyzing the structure and performance of food processing industries, forecasts food prices, estimating farm-to-retail price spreads, and regularly providing cost estimates for food assistance programs. An annual publication, *Food, Consumption, Prices, and Expenditures*, reports trends in per capita consumption of basic food cat-

egories and food spending, and is one of five components of the Federal government's nutrition monitoring system. Other regular publications such as the Food Cost Review and the Food Marketing Review, report on marketing margins, farm-to-retail prices spreads, and the food processing and marketing industries.

ERS has expanded its food-related work in an effort to understand how education about diet and nutrition influence consumers' food choices. For example, working in cooperation with other USDA agencies, ERS is assisting in developing evaluation techniques for assessing progress in improving the diets of individuals at nutritional risk, who are often also participating in Federal food assistance programs. ERS has also formed a partnership with the National Cancer Institute (NCI) in which ERS will study the food costs of healthy diets and NCI will study the linkage between healthy eating and disease, an area in which surprisingly little research has been done. On-going activities in the economics of nutrition include examining the contribution food consumed away from home makes to individual nutrient intakes, studying the health costs poor diets impose on society, analyzing the impacts better eating habits may have on the agriculture sector, studying consumption trends and prices of low-fat or low-sodium foods versus their higher-fat or sodium counterparts, and analyzing how nutrition knowledge, attitudes and awareness influence intakes of specific nutrients (such as fiber, iron, and fat) as well as particular foods. ERS and several cooperators, including Cornell University, the Farm Foundation, and NCI are planning a symposium in 1997 to consider the implications for agriculture and the economy as Americans begin to eat the types and quantities of food suggested by the Dietary Guidelines for Americans.

ERS research in the economic analysis of the food assistance programs emphasizes the full range of economic effects and represents the current state of knowledge of the relationships between food programs, agriculture, and the economy at-large. For example, ERS collaborated with USDA's Food and Consumer Services agencies to estimate the cost of bringing the School Lunch Program in line with USDA's dietary guidelines, assess the impacts on the economy and agriculture of proposals to change Federal and State roles in the provision of food assistance, and devise economic indicators for forecasting food and nutrition program outlays.

ENSURING FOOD QUALITY AND SAFETY

As national concern about the safety and nutritional value of food has grown, ERS has devoted more of its research resources to gaining a better understanding of the economic aspects of food quality and safety issues. ERS's research in the food safety area is focused on understanding how food production and handling practices can be altered to reduce chemical and microbial contamination. The research program focuses on the marginal costs and benefits of government intervention and is designed to better understand the economic tradeoffs facing producers, processors, consumers, and regulators. For example, the agency has collaborated with USDA's Food Safety and Inspection Service (FSIS) in estimating the economic effects of the Hazard Analysis Critical Control Points (HACCP) regulations governing inspection of meat and poultry. ERS continues to work with FSIS and the Departmental Office of Risk Assessment and Cost Benefit Analysis to provide economic analyses of proposed regulations that affect human health.

IMPROVED HARMONY BETWEEN AGRICULTURE AND THE ENVIRONMENT

ERS is an important national source of high quality, relevant, and objective information and analysis on the interactions among natural resources, environmental quality, and agricultural production and consumption. ERS' program helps the Department obtain critical information necessary to improve harmony between agriculture and the environment. ERS research considers economic and environmental effects of alternative production management systems (such as integrated pest management, nutrient management system, and precision farming); benefits and costs of alternative agricultural and environmental policies and programs; the interaction between foreign and domestic environmental regulations and agricultural production, consumption, and trade; global climate change and its effects; expenditures, returns, and comparative advantages of public and private research funding; and development of environmental and productivity indicators.

ERS recently participated as a sponsor of the Third Annual National Integrated Pest Management symposium, drawing particular attention to the methodologies for assessing the adoption of improved farm management practices. The Agency will now turn its attention to emphasizing the need for consolidated assessments of the economic, environmental, health, and social issues affecting adoption and the effectiveness of integrated pest management systems.

This year, ERS will critically evaluate how financial assistance, technical assistance, education, research, and data development have contributed to the effectiveness of USDA's Water Quality Program. ERS analysts will also be estimating the costs and benefits of alternative market-based approaches that could be used to help farmers adopt environmentally friendly and profitable production practices. The annual Agricultural Resources and Environmental Indicators report will continue to provide timely data and analysis on the trends and important issues regarding agricultural land, water, manufactured inputs, technology, and public policy. The Agency will continue to provide timely analysis of agricultural research to better understand factors affecting public and private investment in research and returns to research dollars. ERS analyses will also evaluate the effect of environmental policies on agricultural trade and competitiveness and how trade liberalization may affect environmental quality. Global change and its potential impact on world food production is a continuing research theme.

ADVANCING BIOFUELS AND NEW USES OPPORTUNITIES

ERS has supported the Administration's continuing effort to include fuels derived from renewables sources, such as ethanol, in the reformulated gasoline program. The Agency will continue to analyze this important market and participate in development and implementation of Clean Air Act amendment regulations affecting ethanol and other biofuels. Stricter Federal air quality standards and energy security concerns have prompted the Government and private industry to search for fossil fuel substitutes. Biodiesel, made from vegetable oils, is an alternative fuel at an early stage of development and needs to overcome several regulatory and economic barriers to become commercially feasible. The Agency is pooling resources with the National Biodiesel Board, the American Soybean Association, the Department of Energy (DOE), and others to address biodiesel research gaps and create a potential new market for agricultural fats and oils. USDA, DOE, and EPA have been conducting technical and economic analyses of the conversion of crops and agricultural residues or wastes into liquid fuel and electricity. ERS analysis indicates that in several areas of the country a mixture of liquid fuel and electricity from biomass is possible. The development and commercialization of new farm crops and new uses for existing crops, such as biomass for energy, highlights the potential that development of new markets for agricultural products holds for boosting farm income and helping businesses that sell goods and services to farmers.

CLOSING REMARKS

I appreciate the support that this Committee has given ERS in the past and look forward to continue working with you and your staffs to ensure that ERS is addressing the highest priority issues and making the best possible use of the resources entrusted to us by the U.S. taxpayer.

Thank you. I will be happy to respond to your questions.

PREPARED STATEMENT OF DONALD M. BAY

Mr. Chairman and members of the Committee, I appreciate the opportunity to appear before this Committee to discuss the fiscal year 1997 budget request for the National Agricultural Statistics Service (NASS). This Service was created in 1862 to provide useful, timely, and unbiased statistics and other information about the Nation's food and agricultural industry.

The structure of farming and of the agricultural industry has changed dramatically since the initial crop reports were issued over 130 years ago. However, the need for accurate, timely, and impartial statistical information on the Nation's agriculture has become even more important as the Nation has moved from subsistence agriculture to a highly industrialized agricultural industry producing food and fiber for the world market. The crop, livestock, and other estimates developed and published throughout the year, in cooperation with State Departments of Agriculture, contribute significantly to the information available on American agriculture. The State-Federal cooperative relationship, which began nearly 80 years ago, eliminates duplication and provides State input, while maintaining national consistency in surveys conducted throughout the United States.

The agricultural statistics program provides information critical to the entire food and fiber system which totals over 16 percent of the gross domestic product, and employs more than one out of every six employees in the United States. The basic supply information provided by NASS directly affects producers, handlers, processors, wholesalers and retailers of agricultural commodities.

The Nation's food industry affects the U.S. balance of trade, the nutritional well-being of our citizens and people around the world, and the quality of our environment, and NASS estimates play an important role in supporting this industry. Today, NASS spends about $\frac{1}{25}$ of a cent per dollar of sales of raw agricultural commodities to provide the basic impartial and unbiased statistics that underpin the United States and world commodity markets. NASS works to ensure the quality and integrity of its surveys in order to provide timely and accurate agricultural statistics. These statistics are essential because they help provide a level playing field and reduce market risk.

NASS statistical reports are not only used by the food and fiber industry to assess the supply and demand of agricultural commodities, but they are also used by farm organizations and government officials for analysis of agricultural policy, foreign trade, conservation programs, agricultural research, environmental programs, rural development, and many other activities. NASS data are examined very closely by farmers, agribusinesses, food industry analysts, economists, investors, as well as the Federal Government, as they make decisions that affect the Nation's economy. All reports issued by NASS's Agricultural Statistics Board are made available to the public at previously announced release times to ensure that everyone is given equal access to the information. NASS has been a leader among Federal agencies in providing electronic access to information. All of NASS's national statistical reports are available on the Internet. Graphics products and historical crop and livestock data are also available on Internet as well as the popular book, 1994 Agricultural Statistics, which is now available on CD-ROM as well as Internet.

This year, as we move into the 1996 planting season, more than the usual uncertainty surrounds the commodity outlook, both in the United States and worldwide. The combination of a new U.S. farm bill, as well as the tight world stocks of major grains, oilseeds, and fiber crops, places increased importance on timely and accurate information. Everyone engaged in the agricultural industry depends on this information to make sound production and marketing decisions.

The responsibility for the Census of Agriculture is proposed to be transferred from the Department of Commerce to the Department of Agriculture, consolidating the activities of these two agricultural statistics programs. By pooling the resources and experience of both agencies, the transfer of the Census of Agriculture to USDA will streamline Federal agricultural data collection activities, improving efficiency and the quality of data provided. The Census of Agriculture is conducted every 5 years and the next one will be taken in 1998 for the 1997 calendar year.

Statistical research is conducted to improve methods and techniques used in collecting and processing agricultural data. This research is directed toward providing higher quality survey data with less burden to respondents, producing more accurate and timely estimates to data users, and increasing the efficiency of the entire survey process. For example, NASS has been a leader in the research and development of satellite imagery to improve agricultural statistics. The NASS statistical research program strives to improve methods and techniques for obtaining agricultural statistics with an acceptable level of accuracy. The growing diversity and specialization of the Nation's farm operations have greatly complicated procedures for producing accurate agricultural statistics. Development of sophisticated sampling and survey methodology, along with intensive use of personal contacts and computers, enables NASS to keep up with an increasingly complex agricultural economy.

NASS also performs an expanding number of statistical services for other Federal, State, and producer organizations on a cost-reimbursable basis.

MAJOR ACTIVITIES OF THE NATIONAL AGRICULTURAL STATISTICS SERVICE (NASS)

The primary activities of NASS are to conduct surveys which include the collection, summarization, analysis, and publication of reliable agricultural forecasts and estimates. Farmers, ranchers, and agribusinesses voluntarily respond to a series of nationwide surveys about their crops, livestock, prices, and other agricultural activities each year. Periodic surveys are conducted during the growing season to measure the impact weather has on crop production. Frequent surveys are also needed on food products that are perishable. Many crop surveys are supplemented by actual field observations in which various plant counts and measurements are made. Administrative data from other State and USDA agencies, as well as data on imports and exports, and information from the Department of Commerce, are thoroughly analyzed and utilized as appropriate. NASS prepares estimates for over 120 crops and 45 livestock items which are published annually in almost 400 separate reports. The World Agricultural Outlook Board utilizes NASS data for the U.S. portion of its reports as does the Economic Research Service in its Situation and Outlook re-

ports. NASS data on prices received by farmers are currently used by the Farm Service Agency for the computation of deficiency payments.

Agricultural estimates developed and published by NASS include: number of farms and land in farms; acreage, yield, and production of grains, hay, oilseeds, cotton, tobacco, major fruits and vegetables, floriculture, and some specialty crops; stocks of grains; inventories and production of hogs, cattle, sheep and wool, goats, catfish, trout, poultry, eggs, and dairy products; prices received by farmers; prices paid by farmers for inputs and services; cold storage supplies; agricultural labor and wage rates; agricultural chemical usage; cultural practices; and other data related to the agricultural economy.

The NASS agricultural statistics program is conducted through 45 field offices servicing all 50 States. Nearly two-thirds of the Agency's staff and resources are located in the field. All State offices operate under cooperative funding and 24 are collocated with State Departments of Agriculture or land-grant universities. This joint State-Federal program helps meet State and national data needs while minimizing overall costs, eliminating duplication of effort, and reducing the reporting burden on farm and ranch operators.

NASS has developed a broad environmental statistics program under the Department's water quality and food safety programs. Until 1991, a complete void in the availability of reliable pesticide usage data existed. This became evident during the Alar apple situation. In cooperation with other USDA agencies, the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA), NASS has implemented comprehensive chemical usage surveys that collect data on selected crops in selected States. These surveys also collect detailed economic and cultural practice information for the purpose of determining the use of Integrated Pest Management (IPM) practices as well as to analyze the profitability of different levels of chemical use.

The increase in agricultural product differentiation and market complexity has made certain individual commodities much more heterogeneous. This, in turn, has led to an increased need for more detailed information. For example, a vast amount of U.S. barley is sold on the basis of variety. Therefore, having data on just total barley production is no longer sufficient to support the domestic and growing international market for selling specific varieties of barley.

The collection of public statistics on agriculture preceded Government commodity programs and was designed to assure competitiveness in commodity markets. Therefore, a reduction in spending on Government commodity programs is not expected to reduce the need for agricultural statistics, and may actually lead to a greater demand for accurate information as producers take their production signals entirely from the market. Empirical evidence suggests that increased information improves the efficiency of competitive markets. A lack of information or inaccurate information can cause producers to underproduce or overproduce, misuse storage, or miss foreign or domestic market opportunities. Further growth in producers' ability to process and analyze data will also increase their demand for information.

The fact that our farms and ranches manage half the land mass in the United States certainly underscores the importance of having complete and accurate statistics on chemical use and cultural practices to properly address public concerns about the environmental effects of agricultural production. Annual surveys are needed to assess the current level of IPM adoption by growers in order to support the research and educational efforts to assist farmers in adoption of improved pest management practices.

The Census of Agriculture provides national, State, and county data for the U.S. on the agricultural economy every five years, including: number of farms, land use, production expenses, farm product values, value of land and buildings, farm size and characteristics of farm operators, market value of agricultural production sold, acreage of major crops, inventory of livestock and poultry, and farm irrigation practices. The Census of Agriculture is the only source for this information on a local level which is extremely important to the agricultural community. Detailed information at the county level help agricultural organizations, suppliers, handlers, processors, and wholesalers and retailers better plan their operations. Important demographic information supplied by the census also provides a very valuable data base for developing public policy for rural areas.

NASS conducts a number of surveys and provides consulting services for many USDA agencies and other Federal, State, and private agencies or organizations on a cost-reimbursable basis. Consulting services include assistance with survey methodology, sample design, information resource management, and statistical analysis. NASS has been very active in assisting USDA agencies in programs that monitor nutrition, food safety, environmental quality and customer satisfaction. In cooperation with State Departments of Agriculture, land-grant universities, and industry

groups, NASS conducted 161 special surveys covering a wide range of issues including Colorado grazing fees, Texas goats, and special nursery/horticulture studies in several States, to name a few.

NASS provides technical assistance to improve agricultural survey programs in other countries in cooperation with other Government agencies on a cost-reimbursable basis. Until recently, this program focused on the developing countries in Asia, Africa, the Middle East, and Central and South America. However, a major effort is now underway to assist former Soviet bloc countries during their transition to a market economy. Accurate information is essential in these countries for the orderly marketing of farm products. NASS works directly with countries undergoing the transition from centrally planned to market economies by assisting them in applying modern statistical methodology, including sample survey techniques. NASS has a strong program underway in Albania, Bulgaria, Kazakhstan, Nicaragua, Poland, Romania, and Ukraine, and is just beginning to assist Russia with its agricultural statistics program.

NASS annually seeks input on improvements and priorities from the public through: regional data user meetings with representatives from agribusinesses and commodity groups, special briefings for agricultural leaders during the release of major reports; and numerous individual contacts. The Agency has made many adjustments to its program and reports as a result of these activities.

NASS's fiscal year 1996 budget authority increased \$148,000 from fiscal year 1995. To continue all statistical reports and absorb increased operating costs, NASS has reduced the following: objective yield surveys for wheat and corn; cooperative research program funding; development of new data processing systems; purchases of replacement equipment; staffing; training; and travel.

FISCAL YEAR 1997 PLANS

The fiscal year 1997 budget request is for \$102,624,000. This is a net increase of \$21,523,000 over fiscal year 1996 which includes \$17,500,000 to fund the 1997 Census of Agriculture. Funding for the Census of Agriculture is proposed to be transferred from the Department of Commerce, Bureau of the Census, to the Department of Agriculture, National Agricultural Statistics Service. This action will consolidate the activities of the Census of Agriculture with the current agricultural survey program administered by NASS. By merging these two programs, major efficiencies will be attained in building a complete list of farm and ranch operators and reducing the reporting burden on agricultural producers.

The transfer of the Census of Agriculture to USDA will also improve the quality of USDA's current agricultural statistics program by pooling the resources of both agencies. The Census of Agriculture will benefit from the local knowledge base that the NASS field office infrastructure will contribute. In addition, this distributed infrastructure will make it possible to review and summarize the results of the census in a more timely fashion.

The recommended merger of these two complementary Federal programs will make it possible to better serve the public in the future with timely and accurate agricultural information. Not only will this change eliminate duplication, but it will also reduce the reporting burden of agricultural producers who will now be asked to report their basic data to a single Federal agency.

An increase of \$1,500,000 and 7 staff years to collect integrated pest management data (\$100,000 available in 1996). In 1993, the Administration announced a goal of having 75 percent of the Nation's cropland under integrated pest management (IPM) practices within 7 years. USDA, the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA) called for a national commitment to develop and implement the IPM initiative by the year 2000. The ability of USDA to make progress in the adoption of IPM practices and to measure results of participation in IPM programs is critical. USDA needs high quality information on the use of pesticides and pest management practices to carry out responsibilities under this IPM initiative. Through an annual national survey of farmers, NASS will provide the basic data necessary to determine the extent of IPM use and the economic and environmental benefits derived from IPM practices. The information collected will include the IPM practices used by farmers, pesticides used, application rates, and financial costs and returns.

NASS will provide information on pesticide use for the whole farm. Currently, all pesticide use surveys are crop-specific and State-specific. A whole-farm survey differs from crop-specific surveys in that pesticide use is collected for all crops, livestock, pasture, roadsides, storage facilities, and every other use on the farm. These data will provide the first comprehensive measure of agricultural pesticide use at

the U.S. level. The whole-farm survey will be designed to complement the crop-specific surveys.

The \$1.5 million funding request will allow NASS to collect nationwide data on IFPM participation, including all farms and all phases of agricultural production. Surveys conducted to acquire information on whole-farm pesticide use will also result in significant new chemical use information, which will be an important addition to the existing chemical use data base.

An increase of \$600,000 and 3 staff years to collect postharvest pesticide data (\$0 available in 1996). Currently a large gap exists in USDA's ability to inform EPA, FDA, and the Agricultural Marketing Service (AMS) on the extent of pesticides applied to foods just prior to actual consumption. This funding increase will allow collection of data on pesticides and other chemicals applied to commodities after they leave the farm. Two commodities of particular interest are apples and potatoes, since post-harvest pesticides and other chemicals are frequently applied to retard spoilage and enhance appearance. In the first year, NASS will collect postharvest data in 12 States on apples and potatoes, both of which are widely consumed and of interest in assessing exposure for infants and children. Also, the apple industry has worked for over 40 years to be able to export apples into Japan. Many of Japan's import barriers are due to concerns over chemical use. There has been a lack of sound data to show actual usage, especially in the postharvest area. The issue of the chemical, Thiabendazole, being detected on apples recently exported to Japan illustrates the sensitivity of postharvest chemical usage. Based on experience gained from those surveys, NASS will rotate to postharvest surveys of other crops in other States. The specific crops and States included in the survey will be determined each year in consultation with EPA, FDA, and USDA's AMS to ensure that the most important and relevant data are being collected and to ensure an important linkage with the residue data collected by AMS.

An increase of \$1,000,000 and 4 staff years for additional pesticide use data (\$3,500,000 available in 1996). The Secretary of Agriculture and the Administrator of the Environmental Protection Agency have agreed to work jointly toward the reduction of pesticide use. In order to accurately analyze the impact of chemical use, reliable data are needed for additional crops and States not currently provided by on-going surveys. Sound pesticide regulations depend on quality data to support informed decision making. Reliable pesticide use data are now only available for major food crops and major States. The EPA and other agencies have requested an expansion of this program to include additional crops and new States. Detailed data such as date of application, targeted pests, and associated crop yields would also be collected. Pesticide use data on many of the so-called "minor" or specialty crops does not exist at this time. Without these data, the registration or re-registration for "minor" crop pesticides may not be possible, which could directly impact the ability of producers of these "minor" crop commodities to stay in business.

Increased funding will enable NASS to expand its coverage to 10 additional States and 10 additional crops. This will ensure that accurate data are available on high value crops for which data are now lacking and for those pesticides most vulnerable to regulatory scrutiny.

An increase of \$1,403,000 for pay costs which consists of \$305,000 for the annualization of the fiscal year 1996 pay raise and \$1,098,000 for the 3.0 percent estimated fiscal year 1997 pay raise.

A decrease of \$480,000 for administrative overhead reduction. In support of the Secretary's streamlining efforts and the President's Executive Order to reduce overhead-type outlays, the budget authority for agricultural statistics is reduced by \$480,000.

In order to achieve these savings, NASS will reduce administrative staffing, inter-station transfers, field staff travel to Headquarters for Agricultural Statistics Board assignments, and other travel, as well as reducing training, supply purchases, printing and reproduction costs, utility usage, and equipment replacement.

This concludes my statement, Mr. Chairman, and I will be happy to respond to any questions.

BIOGRAPHICAL SKETCHES

KARL N. STAUBER

Karl N. Stauber was confirmed by the United States Senate as the Under Secretary of Agriculture for Research, Education, and Economics on May 23, 1995. He served as the Acting Deputy Under Secretary of Agriculture for Research, Education, and Economics since December, 1994. President Clinton selected Dr. Stauber

for this post because of his extensive work in developing and funding research projects involving land grant universities, state experiment stations and farmer-controlled organizations.

Stauber leads the management of the U.S. Department of Agriculture's science, technology and education activities relating to food and agriculture. The position he holds is a new one, created by the recent reorganization of the Department. Combining the responsibilities of the former Assistant Secretary of Science and Education with the Assistant Secretary for Economics, the Under Secretary for Research, Education and Economics oversees the Cooperative State Research, Education, and Extension Service, National Agricultural Statistics Service, Economic Research Service, and Agricultural Research Service.

Before his appointment as Acting Deputy Under Secretary for Research, Education, and Economics, Stauber served as the Deputy Under Secretary for Small Community and Rural Development. Stauber oversaw policy and budget development for USDA's Farmers Home Administration, Rural Development Administration, and the Rural Electrification Administration.

Prior to joining USDA, Stauber served as the Vice President of the Northwest Area Foundation, a private foundation based in St. Paul, Minnesota that annually grants approximately \$14 million to increase the economic vitality of low-income communities in Washington, Oregon, Idaho, Montana, North Dakota, South Dakota, Minnesota, and Iowa. In that capacity he conceptualized and ran a series of model research efforts for the Northwest Area Foundation in St. Paul, Minnesota. These multi-disciplinary, multi-state research efforts explored value-added agriculture, rural business development, natural resource management, and comparisons of conventional and sustainable agricultural production systems.

In the mid-1980's, Stauber co-founded and ran a venture capital firm that promoted business development throughout the U.S. Between 1978 and 1984, Stauber was the Executive Director of the Needmor Fund, a private foundation based in Toledo, Ohio. Previously, he served as the assistant director of the Mary Reynolds Babcock Foundation in Winston-Salem, N.C., and held several posts in North Carolina state government.

A native of Statesville, N.C., Stauber received a B.S. in American Studies from the University of North Carolina, a certificate from the program for management development at the Harvard Business School, and a Ph.D. in public policy at the Union Institute, Cincinnati, Ohio. Stauber's ties to USDA are longstanding. His father was born on a Federal Experiment Station in Oklahoma and his grandfather was a career USDA employee. Stauber has been married to Hollis Scott Stauber since 1971.

B.H. ROBINSON

Dr. B.H. Robinson was named the Administrator of the United States Department of Agriculture's Cooperative State Research, Education, and Extension Service in January 1996.

Dr. Robinson comes from USDA's Economic Research Service where he served as Director of the Natural Resources and Environment Division since October 1994. He was the Director of the ERS Agricultural and Trade Analysis Division from 1990 to 1994. Dr. Robinson was ERS' Associate Administrator from 1986 to 1990. He started his career with ERS in 1965 as an economist.

From 1972 to 1986, Dr. Robinson served on the faculty of Clemson University. In his last position at Clemson, he was head of the Department of Agricultural Economics and Rural Sociology. Dr. Robinson has published over 100 articles, book chapters, and extension reports.

Dr. Robinson has been recognized by USDA and the agricultural ministries in Eastern and Central Europe and the former Soviet Union for his leadership and effectiveness in developing and delivering research, education, and data programs to the countries. He received a USDA Superior Service Award and a Presidential Rank Award for his contributions.

Born in Madison County, North Carolina, Dr. Robinson earned a B.S. degree in agricultural science from Berea College in Kentucky, a Master of Science degree in economics from North Carolina State University, and a Ph.D. degree in agricultural economics from Clemson University.

SUSAN E. OFFUTT

Susan E. Offutt became Administrator of the Economic Research Service on January 21, 1996. The Economic Research Service is an agency that provides economic

and other social science information and analysis for public and private decisions on agriculture, food, natural resources, and rural America.

Prior to becoming Administrator of ERS, Susan was the Executive Director of the Board on Agriculture and Assistant Executive Officer at the National Research Council of the National Academy of Sciences. The Board conducts studies and holds conferences on a range of topics in agricultural science, including work on the future of the land grant colleges of agriculture, precision farming, forest management, animal nutrition, biological and conventional pest control, and animal welfare.

Before taking over at the Board in January 1992, Susan was chief of the agriculture branch at the Office of Management and Budget. During her tenure there she coordinated budget and policy analyses of the 1990 farm bill for the Executive Office of the President.

Susan is also an alumna of ERS, having served as a section leader in the old Resources and Technology Division in 1987/88. Before that, she spent a year as a cooperative researcher with RTD in 1985/86, while on leave from her position as assistant professor at the University of Illinois, where she taught econometrics and public policy in the agricultural economics department. Her disciplinary research interests include commodity market instability and structure and the economics of the development and adoption of new technologies.

Susan was born in Newport, Rhode Island. Susan received a B.S. degree from Allegheny College (1976) and a M.S. (1980) and Ph.D. (1982) from Cornell University.

OVERALL INCREASE REQUESTED

Senator COCHRAN. Let me just ask a couple of questions in response to the statement that you made. You indicated that the overall increase requested for these agencies amounts to about 9 percent compared with last year's level. Did I hear that right?

Dr. STAUBER. The 9-percent increase is for the Agricultural Research Service.

Senator COCHRAN. Oh, that's just ARS?

Dr. STAUBER. Yes, sir; overall for all the agencies, we are at approximately the same level in fiscal year 1997 that was actually funded in fiscal year 1996.

Senator COCHRAN. I appreciate that clarification, because we are likely to have a freeze, or more or less a freeze, in our allocation that would be available for appropriation this year compared with last year's funding level. So, it is going to be awfully difficult to start off elevating expectations that we might be able to come up with this kind of increase. Where are the offsets occurring generally in the budget request? If you are asking for the ARS increase of 9 percent, what have you reduced by 9 percent?

Dr. STAUBER. The offsets, in general, are occurring in two areas. I would like Dr. Horn to respond specifically to ARS. In the total budget package, you will note that there is approximately \$100 million in the CSREES budget that relates to noncompetitive facilities and research grants.

Senator COCHRAN. This is basically the same difference that we have every year, isn't it, with whoever is in the administration—Republican, Democrat, Liberal, or Conservative.

Senator BURNS. It does not make a difference.

Senator COCHRAN. They want to make the decisions about where the research dollars are spent and how they are spent and at which facilities. Most of them are government facilities, rather than university-based or college-based research. That is the same difference that we always have.

Dr. STAUBER. It is a set of arguments that you have heard before, and I will not bore you by repeating them all.

Senator COCHRAN. Yes.

ARS BUDGET PROPOSAL

Dr. STAUBER. There are some specific shifts that are proposed within the ARS budget, and I would like to ask Dr. Horn to respond to the 9-percent area in that regard.

Dr. HORN. The 9-percent overall increase includes some buildings and facilities that are identified and actually quite costly, but sorely needed. Actually, the net increase to the ARS budget in the program arena would be about \$16 million and then another \$20 million plus or minus comes from redirected projects.

This actually is quite different this year in that we are not proposing location closures as a part of the budget process, but rather we have evaluated each of our approximately 1,200 projects and identified the lower quadrant and rated those to see if we could identify the lesser priorities. Every single project we have is important to someone, but we have identified 20 million dollars' worth of projects to close out and redirect those toward the higher priorities that have been identified.

INFECTIOUS DISEASES AND OTHER OUTBREAKS

Senator COCHRAN. We appreciate that very much. You can be assured that we will very carefully review this proposal and those requests and try our best to respond to the needs that exist out there. There are some very high profile areas.

You mentioned the methyl bromide alternative research that is going on. There is this mad cow disease that has everybody worried. Karnal bunt in wheat is a serious problem and is plaguing some areas.

I don't know the extent to which your research is directed toward forestry or wood products, but of course methyl bromide is used heavily in the nursery industries and in the seedling development in pines and many other forest species.

Do you have any responsibilities or are you exercising any discretion to do research on this oak disease in Texas that seems to be moving eastward—I have forgotten the name of it now. Willow oak or something like that. Does that ring a bell with any of you?

[No response.]

Anyway, there are some other forest diseases that seem to be creating very serious concerns in the South and in the Southeast. Do you do any research in that area as well?

Dr. HORN. We have several research programs that, for example, relate to biological controls in some of these areas. Of course, when trees are planted in orchards, it is an area where we have a great deal of research interest. The majority of the research done related to tree varieties that are being used for pulp or lumber however continues to reside within the Forest Service and their approximately \$200 million a year research program.

ALTERNATIVES TO METHYL BROMIDE

Senator COCHRAN. Yes; the Forest Service. What is the likelihood and timeliness of the development of an alternative to methyl bromide? Can you give us any indication of what your early assessment of that is?

Dr. HORN. Well, methyl bromide is clearly one of the most important chemicals in use in American agriculture and many other places around the world. We have redirected a considerable set of resources to try and find alternatives. We doubt that there is going to be any single alternative identified, but there are a whole array of possibilities that can be used as alternatives to pest control.

There are two ways that methyl bromide is used, of course: one is in soil fumigation in the control of soilborne disease organisms and then the other is in postharvest deinfestation of crops for import or export. We are trying to put together a number of systems that involve various aspects of integrated pest management, some alternative chemical usages, and the like.

We are also in the postharvest arena taking a look at systems of fumigation that will recover all of the methyl bromide in hopes that if all else fails then perhaps the law could be modified in some limited use of methyl bromide with complete containment, and no release into the environment might be acceptable.

We have about \$13.7 million directed to methyl bromide research, and of course an increase requested. This is a very, very high priority for us. We are working in very close connection with the industries, particularly in California and in Florida and in several other places across the country.

In order to facilitate the communications with these groups, we have put together a newsletter that is out quarterly and actually in the bag that was on your chair there, there is at least one copy of that new newsletter, and it is getting pretty good reviews. As best we can, we are on top of this.

Senator COCHRAN. Thank you very much for that information. We wish you good luck on that. I do not know anything that is concerning agriculture more than that issue right there.

Senator BURNS, do you have some questions that you wanted to ask?

KARNAL BUNT

Senator BURNS. Thank you, Mr. Chairman. I want to just zero in on a couple of things. One of my problems is parochial. I think, Dr. Horn, we will talk about that at a later date or I will give it to you in writing. I had sort of a misunderstanding and they got a bigger ball bat, and now I understand the issue a lot better now.

The Karnal bunt has really got me concerned. We know that it started in our Southwestern States. Could you give us an update where we are on that? I think it has really a serious economic impact.

Dr. HORN. Well, Karnal bunt is of course a fungal organism that originated in India, and it made its way to several countries around the world. It is present in Mexico. The United States has not experienced this problem until this past year. It does affect the yield of small grains of wheat and the quality somewhat, but it is not a serious agronomic problem.

It is, on the other hand, a very serious trade problem, because most of our trade relationships depend on not having Karnal bunt. Countries that do not have it, of which there are about 23 or so of our important trade partners, do not want it, and they will not

accept wheat that might carry Karnal bunt from countries that have it.

We are renegotiating that process. In the meantime, there have been about 22,000 to 25,000 acres of infested lands in Arizona identified, and a number of batches of seed or wheat of one kind or another have been transported out of Arizona to other parts of the country that have subsequently tested positive.

The main activity resides with APHIS of course, but ARS and other parts of this mission area are very important in terms of providing technical support to APHIS. We have generated tests that can positively identify Karnal bunt. There is a relatively inexpensive, quick test that generically does so, and it is about \$100 a sample. Then there is a much more definitive one that costs about \$1,000 a sample.

We are discussing the possibility of testing virtually every licensed elevator in the United States. There are about 15,000 of those. We are talking about developing procedures to deinfest equipment that makes the migratory run from south to north in the harvest process, and we are on a fast track to do that.

We have ways of cleaning up equipment if the spores are out of the seed, but we do have some researchable problems in that we are not sure how to kill the spores that have not been released from the seeds. There are some research activities underway. It is a very serious problem.

Senator BURNS. Dr. Horn, now, it is my understanding that this is more prevalent in durham; is that correct?

Dr. HORN. I'm sorry?

Senator BURNS. In durham, it is more prevalent?

Dr. HORN. It is at this point. It certainly is a big problem.

Senator BURNS. Can it also infest winter wheat?

Dr. HORN. Yes.

Senator BURNS. Both hard red and soft red?

Dr. HORN. Yes.

Senator BURNS. Does the climate during the——

Dr. HORN. Let me make sure I am telling the truth here. That's correct, isn't it?

A PARTICIPANT. Yes.

Dr. HORN. Yes; thank you.

Senator BURNS. OK. Now, does it make any difference like in Arizona where you have a moderate temperature the year around, what about the Northern States where we get a little cold weather every now and again?

Dr. HORN. The outbreak of Karnal bunt is clearly dependent upon climatic conditions. The conditions do not normally occur even in the Southern parts of the United States, but on occasion they do, and that is what happened to us in Arizona.

Normally, we would not expect outbreaks in the Northern States. However, if we transfer bunted grains into the North, then the spores would be there, and the spores are very long-lived in the soil, so it becomes a serious problem for wheat land.

COMMITMENT TO BIOSCIENCE

Senator BURNS. Moving some researchers around, and what we talked about, and I will allow my colleagues some questions here

and not dwell on this because it is more of a parochial problem than it is anything else, but again I would like to hear your commitment to the bioscience.

What I was speaking to that group with in San José last night has a lot to do with you, Dr. Robinson. How we move information and how we protect information encryption and this type, how we protect our intellectual properties, that was the subject last night. I realize that that is kind of a tall subject for this Senator. Nonetheless, to understand it, it is also going to be a tool that we are going to have to use. Dr. Woteki is probably pretty familiar with that too. For the record, I would like to have your commitment to the biosciences, that we are doing things in that area of research.

Dr. STAUBER. Particularly in managed environments, we see ourselves and our colleagues in the land-grant community as the leadership in the world in the area of biological sciences. It is an area where we want to continue to exercise that leadership, and there is very firm commitment from this team to continue to do that in a budget challenging environment.

Senator BURNS. Well, it is a changing world out there, and we know that we have got to deal with some problems in that area. We know that some of the chemicals that we have been used to using years ago are not going to be there. Our whole thrust is in another direction.

I appreciate that very much. I have some questions, and then if you would respond to those questions, the individuals, to the committee and to me, I would appreciate that very much.

Mr. Chairman, thank you.

Senator COCHRAN. Thank you, Senator.

Senator Bumpers.

RICE GERMPLASM CENTER

Senator BUMPERS. Thank you, Mr. Chairman.

Dr. Horn, first, I want to thank you for coming down to be with us for the groundbreaking at the Rice Germplasm Center. Second, to congratulate you on being the first commencement speaker at the Dale Bumpers College of Agriculture at the University of Arkansas, which brings me to my next question. Did you get a chance to visit the fish laboratory while you were down there?

Dr. HORN. I did.

Senator BUMPERS. You found it woefully understaffed, did you? [Laughter.]

CARNALL HALL PROJECT

Dr. HORN. I think there were only two or three people there when I got there that day. Yes; it is understaffed.

Senator BUMPERS. We can work out the details of that then later, as long as you understand that that is a really wonderful benchmark laboratory that we've got \$6.5 million invested. It is brand new, and it would be a tragedy not to staff it.

I am not suggesting we have people there doing nothing. That little, old facility down there, long before we built this laboratory, increased or had a big role in increasing catfish production from an annual production of around 400 to 700 pounds a year to up to 4,000 or 5,000 pounds a year. You know, to the people in Mis-

Mississippi and Arkansas who are the big catfish States, that center is extremely important to us.

Now, Dr. Robinson, let me ask you a question. Are you familiar with—let me just read this language. The committee has provided \$1 million for the final phase of the Carnall Hall project to the University of Arkansas. Due to budgetary constraints, the funds provided for this project may be redirected to complete another project initiated under the program at the University of Arkansas if that project is determined to be of a higher priority.

We have scrounged prior private contributions plus State funds for 50 percent of the proposed livestock center there. We had \$1 million of Federal funds in that, but it is a \$4 million project and the only way we can complete it is to transfer that, roughly, \$1 million from the Carnall Hall project over to the livestock center.

That is what this language was designed to do, should the University of Arkansas choose to do that. As you know, they have chosen to do that. I was wondering if you could tell us what we can expect so that they can send their proposal in to you?

Dr. ROBINSON. Yes; I am aware, Senator, of that particular language. It is our understanding that if there is an approved facilities project currently receiving Federal funds, then with the language in the Senate report and a proposal from the university funds can be redirected.

The criterion, as best we can interpret it at this stage of the game, is dependent upon having that additional facility as an approved facility for Federal funding.

Senator BUMPERS. Thank you, Dr. Robinson.

Mr. Chairman, I just have one other parochial question, and it involves the university's proposal on—I mean, I have got to pay them back. When you name a college after somebody, you have got to pay them back. My third pay back for this year is the communications center proposal there. Dr. Stauber, are you familiar with that?

Dr. STAUBER. Yes, sir; I am.

ARKANSAS RURAL AND VIDEO COMMUNICATIONS PROJECT

Senator BUMPERS. Last year, we had language just saying that "The committee is aware of the Arkansas rural and video communications project and urges the Department to provide funding to help establish this vital communications link." Are you familiar generally with what they are trying to do there?

Dr. STAUBER. Yes, sir; I am.

Senator BUMPERS. It is patterned after a Texas A&M project similar to it. It is going to be a little more expensive than I thought it was going to be. In any event, I just wanted to call to your attention that we are going to have to have some help with that.

It seems to me that is a telecommunications project that makes sense to this layman. I do not understand most of them. I do not understand the jargon. I do not understand computers. However, the thrust of what they are trying to do and the synopsis of what they have sent me about what they hope to accomplish, tying all the higher education institutions together, as well as all the USDA State offices in the State, community colleges, and so on. While it would be located in Little Rock, any institution would be able to

bypass the center and go to any other institution. It just seems to me that it makes a lot of sense. Do you have any comments to make on that proposal?

Dr. STAUBER. Senator, I have reviewed the proposal and have met both in Arkansas and in Washington with representatives concerning that proposal. It looks like it is an excellent piece of work. In fact, we have been able to provide minor support to it through several of the mechanisms that we have within ARS and within CSREES. The dilemma that we face is the one of dollars. It is not an inexpensive project. We have a high regard for the project, but as we are struggling with how to deal with the budget questions, where to find the several million dollars that that project needs is a real dilemma for us.

I have made a commitment based on what I perceive the quality of the proposal to do everything in my power to try to find the resources within the means that we have within the Department of Agriculture. We are struggling with that right now. As we move later in the fiscal year, it is an issue that is very high on my list.

IMPORTANCE OF RESEARCH

Senator BUMPERS. Thank you.

Mr. Chairman, I might just make an interesting observation. This has nothing to do with this hearing, except to say that this is the hearing that I really looked forward to more than any other because I think research is so paramount for all of us.

My sister was cleaning out all of our former correspondence and so on yesterday. She brought some of the correspondence. My brother lived in San Francisco and she lived in Cleveland and I lived in Charleston, AR.

Back in those days, you did not just pick up the phone and call every time you wanted to say something, so we wrote lengthy letters, three- and four-page, single-spaced letters. We philosophized and we wrote about politics and we wrote about every topical subject we could conceive of, how we were doing personally, our families. She brought a couple of letters over last night, and I was reading one on the way to work this morning.

I was reading out loud to my administrative assistant, who was driving. He was talking about an experience that he had, had with his first-born son and the pediatrician. The pediatrician gave him some kind of remedy that was utterly worthless to him. He picked up a 35-cent copy at that time of Dr. Spock's book and did what Dr. Spock said.

He said, "I cannot believe this idiot is holding himself out as a pediatrician making \$30,000 a year," and he would learn more for 35 cents than he had learned in med school. He is a Harvard lawyer, so he disdained everybody else's intellect. You know, he always seemed to know more than anybody about every subject.

In the course of the letter, he also pointed out about how many people in his office were dying of heart attacks, and concluded by saying that he had just found that the Department of Agriculture spent more on hoof and mouth disease research than the U.S. Government spent on cancer research. That was in 1956.

That may have been true then. I have not checked it and probably will not check it. It may have been true then. The truth of the

matter is agricultural research is as imperative and as important now as it was in 1956.

Thoughtfully and thankfully, as you know, the budget for the National Institutes of Health where all of these research grants are up to around \$13 or \$14 billion a year, and not all of that is in research grants, but the truth of the matter is we should not pit one against the other because they are all extremely important.

We got our priorities established right and we can afford both. Both are absolutely imperative. That is one of the reasons I really have fought—I don't make any bones about fighting for research projects to the University of Arkansas—because they have been on the cutting edge of alternative pest control and things like that which we all know are necessary. Happily, we got our ducks in a row and now we spend a lot of money on both because they are both very important.

That costs nothing extra, Mr. Chairman.

FORECASTING MARKET CONDITIONS

Senator COCHRAN. Thank you very much, Senator.

In the Economic Research Service area, in your statement I heard you say that a new emphasis was going to be placed on forecasting agriculture market conditions and that an increase is requested to help fund this additional responsibility.

ERS has just embarked upon an effort to come down to an employment ceiling of 620 staff-years and to try to get the employment level under control so that the staff level would support a \$53 million program. My question is, How many additional FTE's are going to be required for this new initiative, and how will producers benefit from it?

Dr. STAUBER. Dr. Offutt.

Dr. OFFUTT. Thank you. The specific increase in the budget is associated largely with collaboration with the National Agricultural Statistics Service to create a data base that allows us to better understand the relationship between farm finances and the adoption of environmentally friendly practices. A large portion of that money will actually go to survey work. It will not require extra analysts.

More generally, we are as a result of the farm bill evaluating the value of the work that we do in market information, but I do not interpret our budget request to actually support an increase in that area over current needs. The bottom line is that the staffing, given the ceiling at 620, would not be increased because of the budget request.

Dr. STAUBER. Mr. Chairman, right now we do not have the data to be able to say, in general, if farmers adopt these kinds of practices it will increase or decrease their farm profitability. With strong cooperation from NASS and their data collection efforts, this ERS activity will give us access to new information which our current staff of analysts can use to provide information that will be more useful to farmers and ranchers throughout the country.

RESEARCH PRIORITY SETTING

Senator COCHRAN. How is the research agenda developed? Who decides what the priorities are?

Dr. STAUBER. In the past, the research agenda at the broadest level within the mission area has been a product of the interaction between our variety of advisory committees, members of this committee, members of its equivalent committee in the other body, and members of both authorizing committees, as well as consultations with our colleagues in the land-grant community and others.

As we move into the future, we are hopeful that the consolidation of our advisory committees will result in the resources necessary to make the new mission area advisory committee more effective. I think we have been undersupporting advisory committee activities in the past. We need to do a better job of reaching out.

We have also, in the last year, made much more of an effort to see that the people that are going to use the information, in fact, value the information.

Karnal bunt and mad cow disease are good examples of this fundamental dilemma in research. We could choose other ones, but Karnal bunt and mad cow disease are both on people's minds right now. One of the reasons that we are in a position to respond to the mad cow disease fears or to the Karnal bunt concerns in this country is because we have been doing research in those areas for 10 to 20 years.

Now, if 15 years ago we had gone out and said, "Should we be doing work on mad cow disease?" My guess is a whole lot of folks would have told us, no, we should not be. In fact, were not only doing work on mad cow disease but also we were doing the fundamental work to help us understand how these types of diseases of the central nervous systems of ruminants occur.

Because we had that long-term basic research program, when the fear broke out, we were in a position to be able to play an important role, both here and in England, in helping people understand exactly how this disease moves forward and how the United States is being protected against it.

RESEARCH-BASED POLICIES

If we had not been doing that research, we probably would not have had a scientific basis for APHIS—a number of years ago—to adopting a policy that says no cows imported from the United Kingdom, no sperm imported from the United Kingdom, and ultimately no meat.

We have put in place a series of activities based on good science and on a long-term science policy. Part of the challenge is always the balancing act between the long-term needs—trying to think ahead and be prepared for that crisis when it breaks out—and also trying to respond to crisis situations, such as the phaseout of methyl bromide for which we need solutions in the next couple of years.

Senator COCHRAN. When some agencies, even those within the Department of Agriculture, request research from ERS on a certain subject, do you respond to that? Do you do that; and if so, do you do it on a reimbursable basis with either other agencies within or outside the Department?

Dr. STAUBER. Dr. Offutt, do you want to speak specifically to ERS?

Dr. OFFUTT. As the USDA's intramural social science agency, we support a broad range of agencies in the USDA mission including,

really the *raison d'être* for the ERS, which was support for the commodity program decisions and market information.

These days we collaborate with the natural resource agencies, the agencies that deal with food and nutrition issues, as well as food safety, just to name a few. The kinds of relationships that we have with those agencies have evolved over time.

Right now, we are reviewing the extent to which we can standardize the relationships with agencies in terms of requiring a reimbursable agreement. This is primarily a result of the budget constraint that we face. We do not now have a consistent policy for either requiring a reimbursable or not requiring one, but we do have some in place with probably about five USDA agencies.

STRATEGIC PLANNING

Senator COCHRAN. You mentioned, Dr. Stauber, your integrated strategic plan to better coordinate the work of these agencies, these four agencies. Will this result in a revised budget submission?

Dr. STAUBER. The GPRA statute requires for the fiscal year 1999 budget a budget submission that is consistent with GPRA. The administration has moved that forward by 1 year and so we are actually beginning work now on the 1998 budget. It is our intention to attempt to make the 1998 submission fully integrated with the GPRA requirements.

Along with our colleagues at OBPA and OMB, we plan to come back to your committee and to the House and talk about the line items and the categories and whether they will provide you with adequate historical information to support the analysis of the programs and activities. We are obviously not going to make these decisions independently only to run into a nice, big, brick wall up here at some high rate of speed.

Senator COCHRAN. We do not want that either.

Dr. STAUBER. Yes; that is not in anybody's interest.

Senator COCHRAN. Yes.

Dr. STAUBER. As we move a little bit further in this process, it is my expectation that probably sometime later this summer or early this fall we will come up here and sit down and have a series of conversations with your staff about how we get from where we are, which reflects the historic pattern, to where we want to be, which is full compliance with GPRA, and how do we integrate that?

CONGRESSIONAL ROLE IN RESEARCH ACTIVITIES

Senator COCHRAN. Do not ignore the politics of the Congress as an element in this process. It is sort of aggravating to me that we go through this charade every year pretending that Congress is not going to add some special research projects, to make that a big deal every year.

Let us all just relax and get used to the idea that Congress is going to express its views on these subjects and have some suggestions and put them in the committee reports, even with directions that funds are to be spent by the administration in certain areas for specific research.

We had a hearing, for example, on the gulf coast of Mississippi—this subcommittee did a few months ago. We were looking at re-

search that was being done in the aquaculture and coastal fisheries areas, wetlands rejuvenation and protection.

We were trying to tie in a number of different Federal Government activities that complemented each other and to show the importance of these activities and their impact on food supply, food quality, food safety. The research being done in some of those coastal laboratories in my State was not really appreciated by many of the people who were living around there. They did not know what was going on in these laboratories or how it made any difference to the economic well-being of the people in our State, to the region, and to our country.

Anyway, the whole point is that a lot of this research was being conducted by congressional initiative and the Department had not recommended it, the EPA and some of the other agencies maybe had not recommended some of the things being done, but it was all working together to provide tangible benefits.

The scientists who came to testify said thank you very much for being involved and taking an active role in helping to shape and influence the direction of our research agenda and the decisions being made. Were it not for you and what you were doing and your subcommittee is funding, we would have a big gap. We would be seeing, for example, shellfish operations down there subjected to a lot of different diseases and outbreaks that would destroy shellfish resources throughout the Gulf of Mexico and nobody would know it until it was too late to do anything about it.

The point I am making is do not just reject out of hand suggestions that come from the Congress about these research activities or where they are to be conducted and how they are to be done. We have a role to play in this too.

I think the more we understand each other, and we know you have good ideas, and we are not just rejecting all of the suggestions that the administration has. We would like to have an open dialog about it. We think that we can make sure that most of our decisions make sense.

Senator BUMPERS. Mr. Chairman, would you yield?

Senator COCHRAN. Yes, sir, Senator.

Senator BUMPERS. Let me just echo what Senator Cochran has said, and he said it more eloquently than I had intended to say it. Last week, the Ag News Bulletin was pointing out that a technique had been developed at Iowa State. It was identifying bacteria such as *E. coli* without having to grow it in a culture dish. Now, *E. coli* is really on the front burner, not just in this country but in the world.

This little food safety consortium: Arkansas has the poultry part, Kansas has the beef part, and Iowa State has the pork part. Iowa State with a very limited, as you know, a small amount of money under that food safety consortium which has been in effect now for 7 or 8 years. The three Senators from those States came up with that idea. We did not think that up; our various colleges of agriculture thought it up.

When you think about that kind of research being done there, where you can definitively identify *E. coli*, a new simpler method makes the money we spent on it look like peanuts. That's the reason I just want to echo, I plead with you don't just dismiss things

like that out of hand because most of the time Senator Burns, Senator Cochran, and I did not just think those things up in a dream one night. Usually, great researchers, good researchers, have brought those ideas to us.

MERIT REVIEW

Senator COCHRAN. Dr. Robinson, just to get a response on my comments, and Senator Bumpers' as well, because I think you might best address this, does the Cooperative State Research, Education, and Extension Service require an application to be submitted which undergoes a merit review before funds are released, and is there cost-sharing often required? Are grants also evaluated and monitored?

I would like for you to explain the process. Some people think that the Department does not do anything in connection with some of these special grants. What do you do? What are your requirements?

Dr. ROBINSON. I would be glad to respond, Senator Cochran. As you know, the grants that are allocated through the Cooperative State Research, Education, and Extension Service for specific projects or specific locations require that the researchers involved submit to the agency a proposal for peer review.

Now, the proposal is reviewed from a merit point of view internally. It does not go through the same type of peer review that National Research Initiative proposals do. To suggest that it is not reviewed for quality is incorrect, as you point out.

Second, peer review has in the past resulted in the agency suggesting to either the scientists who submitted proposals or to staff from your offices that the project, in fact, does not measure up for any number of reasons, even though the project may be in itself a good idea.

The researchers involved are asked to make those revisions and then submit a new proposal for funding which, in fact, responds to the concerns expressed on the merit review. We monitor the project through the review process to ensure that proposal objectives are being followed. You are correct in your statement, quite correct, that a merit review and a progress review are conducted on those projects.

Senator COCHRAN. Senator Burns.

FEED GRAINS RESEARCH

Senator BURNS. I was just handed a note here—and thank you very much—in the area, Dr. Horn, in the area of continuing research on the area of feed grain-based diseases. We understand that there has been some reduction in funds or activity as far as smut and related diseases in feed grains?

Dr. HORN. The only reductions that we would suffer in those would be on a project-by-project basis. As I explained earlier, we went through all of our research projects and selected out some which for one reason or another we could live without.

Some of that was because we had vacancies, some of it was because we had increases going into other locations or even the same locations that would produce better work. I don't know without citing a specific case what might have happened. Overall, our activi-

ties related to small grains diseases are increasing. I would anticipate that will continue particularly with the additional pressure put on us by Karnal bunt.

Senator BURNS. Well, this had more to do with feed grains than it did on small grains or your cereal grains.

Dr. HORN. Oh, I see.

FARM BILL

Senator BURNS. Also, a question to Dr. Robinson. We have passed the new farm bill. I would imagine you are pretty busy making the transition. Your activity has probably picked up quite a lot in assisting the farmers to make a transition from one kind of a farm program to another. Has that been a problem for you?

Dr. ROBINSON. Well, a problem or perhaps the other side of the coin is an opportunity. One of the national initiatives that the Co-operative Extension Service, on partnership with local, State, land-grant universities, and the Federal partner has launched involves efforts to help farmers adjust to the new set of changes that are occurring, the farm bill being the main change.

The farm bill in its current format is a transition bill from the support programs of the past. It means a number of things. How do we help farmers recognize better markets and understand changes in markets as they begin to make adjustments in their own internal decisions?

Second, how do we begin to develop not only educational materials but also a research agenda that supports research to improve the competitiveness of the U.S. agricultural industry within the realm of the new emerging trading order, and in the absence ultimately of support programs and floors that have been provided for U.S. agriculture? We are responding, as you point out, and we have been moving rather rapidly to try to respond to those changes.

Senator BURNS. What makes a USDA unique, I will always believe this, is probably your Department not only the work that is done by ARS, whatever we do in our land-grant colleges, but even in the Department of Commerce, Department of Transportation, Department of Energy where we do research and development, mostly research that has to do with their areas of expertise, only the USDA funds an extension service that allows that information, it may be science, where we can get it into application or applied sciences much quicker. We can make that transition.

That is what makes this, us, unique. I think it is pretty indicative of how important the way we are structured in USDA. I appreciate that. I think if we could just get the different agencies of the Federal Government to talk to one another just maybe on a Friday evening over a beer, it would help. You know, but it seems like we get in the turf business all the time. You do not want to get all piled up. Thank you for your good work, though.

Thank you, Mr. Chairman.

FUND FOR RURAL AMERICA

Senator COCHRAN. Thank you, Senator.

The Fund for Rural America is included in the farm bill. The fund provides mandatory spending of \$300 million, \$100 million per year beginning January 1, 1997. The moneys are split equally

among rural development activities, research grants, and an amount to be used at the Secretary's discretion for rural development or research.

My question is: Has any decision been made as to how the administration would use the Fund for Rural America moneys in a competitive research grant program? Have you begun plans? Do you have any plans to augment the National Research Initiative Competitive Grant Program or in some other way provide for the utilization of these funds?

Dr. STAUBER. Mr. Chairman, we have had underway for several months now a discussion within the Department about how best to utilize both the resources and the flexibility that Congress provided to the Department, specifically to the research and extension component of the Department under the fund for rural America.

We, in fact, had a meeting in the last 10 days with the leadership of the land-grant community to discuss with them their thoughts about how we should be moving forward on the research and extension component. We have also had preliminary conversations with some of our major customers within the commodity organizations.

At this point, we do not have a specific answer to your question. We are in the process of developing that right now. I anticipate that it will be finalized within the next week to 10 days.

The general direction of our thinking at this point is to hold rather quickly an open competition to address the eight broad sets of concerns that are identified in the research title of the 1996 farm bill. In that competition, we would request that—on both the research side and the extension side—the four groups eligible to apply for funds would submit their best proposals to address the broad issues that are outlined in the research title.

We may target some funds into specific areas. We talked earlier, for example, about methyl bromide. Targeting proposals to a particular need is one of the things I would like to see us do with this 2½-year program. I worry about, for example, using it to increase the NRI, because it then raises the potential of an offset on the other side of the equation.

Senator COCHRAN. That was going to be my next question.

Dr. STAUBER. We do not want to expose the NRI, which we think is an absolutely critical program to that type of short-term advantage and long-term disadvantage. It is our expectation that we will try to use this money in very innovative and new ways. And, to the extent possible, we will focus it on concrete problems. For example, we can foresee various groups coming in talking about alternatives to methyl bromide. We could see groups coming in, talking about, "Well, here are a set of research ideas that are near commercialization. How does extension work with that community to make sure that they make it successfully to commercialization?" We also talked earlier about the transition issue. We ought to be looking for ways to use some of the resources within the fund for rural America to help those producers who are now going to be exposed to more risk. Are there ways that we can use science and technology to help them better manage that risk? These are the ideas we are struggling with. Our best notion is, rather than using it for existing purposes that are clearly identified which would then create the po-

tential of the offset, we will likely propose to the Secretary to use the fund in a very different way—it would still be very much a competitive program, but it would be focused on a short-term transition, distinct from what we do with our typical ongoing funding.

NATIONAL RESEARCH INITIATIVE

Senator COCHRAN. We notice that the budget you have submitted proposes a \$33 million increase for the National Research Initiative Competitive Research Grants Program. That would move that program up to a level of \$130 million from last year's level of \$96.7 million.

It makes the question about how the Fund for Rural America will be used, I think, all that more important. Because if you are going to make that big increase, you are going to have to reduce it from somewhere else.

That is why I was trying to figure what kind of mix we can expect when all this comes out, given our disposition to insist on some amount of special grant money being spent by the Department. When do you think we will know the answer to the question of how are you going to use that money?

Dr. STAUBER. In terms of the proposal for the fund?

Senator COCHRAN. Yes.

Dr. STAUBER. I would hope within the next week.

Senator COCHRAN. If you would let us know, that would be good to have that.

Dr. STAUBER. Yes, sir; we will certainly be happy to provide you with that information.

INTEGRATED PEST MANAGEMENT

Senator COCHRAN. There is an integrated pest management budget request initiative here that includes increases of over \$23 million. That is another big item coming in for an increase. How do you define integrated pest management research? What does that include? How much is going to be done by the research scientists? What are they going to do with all of this money?

Dr. STAUBER. Well, I would like to ask my colleagues to respond to that. First, let me say that the increase is not only for research, it also includes a substantial increase in our extension activities. It includes efforts for new data collection in the social sciences and analysis in the social sciences.

We are trying to rather than just looking at the research side of it that will lead to solutions 3 years or 5 years or 10 years down the road. We also believe that we have some solutions right now that are ready for application in the field, building stronger linkages between our existing programs, for example, crop insurance.

Is there a way that we can use IPM in combination with crop insurance to help producers manage risk and at the same time reduce their operational costs and protect their crops? There are a number of innovations that are included in that total package, rather than just simply long-term research. Dr. Robinson, would you like to respond on the definitional side?

Dr. ROBINSON. Senator Cochran, the question is a good one because it does seem like a large increase. There is no really good answer or immediate answer to your question or when asked what

are the three or four components of integrated pest management? It depends upon the location; it depends upon the crop; and it depends upon the kind of research that has been completed.

Let me try to approach it, if I could, from three directions: one is to look at agricultural production systems. That includes the chemicals that are used, the practices, and so forth.

What are the recombinations of those that are different and which could include, for example, new research into biological control alternatives. Currently there is new research on different chemicals that have different rates of application and can be utilized in the production of crops. That is one of the big areas of research. What are some of the alternatives to the current system from a biological control point of view?

Second, what are some of the alternatives that could be used from either a production systems point of view or from an alternative combinations of chemicals point of view? Many of the chemicals are constantly under review and the regulatory procedures for those are pretty significant when it comes to elimination of those chemicals for agricultural production. It is absolutely critical to continue a strong research base that looks at alternatives to those.

Another component of the budget increase is an identification system. One part is an expert identification system which allows us to begin to identify, based on review of research that is either underway or on the drawing board or in the literature, the kinds of questions that are emerging from regulatory agencies with regard to particular chemicals. The other part identifies the critical research areas that need to be addressed and addressed rather rapidly in terms of looking at alternative systems of production or alternative chemicals to ensure continued competitiveness.

Now, the fourth point, as Dr. Stauber pointed out, has to do with, "OK, so we have got it. What the heck do we do with it?" Because unless it is a profitable alternative, farmers are not going to pursue it. Unless it fits into their production system in a way that is easily adaptable and easily managed, they are not going to adopt IPM.

There is a big educational job that is done by the Cooperative Extension Service. A rather significant portion of this increase is to increase extension education efforts in the various States and regions for IPM applications. This is a rather complex set of things.

Interestingly to me, it is this area that the public seems to respond to very favorably and very forcefully. It is the area where we actually are using an integrated approach which involves research, extension education programs, producers, scientists in the land-grant university, and involves scientists in ARS. It is a rather complex approach to a very difficult problem that deals with the interface between agricultural production and environmental integrity.

Senator COCHRAN. I would like to also ask Dr. Horn to respond, since much of the research has been and is being done within ARS.

Dr. HORN. Well, I agree with all that has been said. In addition to that, of course, we have this outstanding promise to have 75 percent of the crop acreage in this country under biointensive IPM by the year 2000. That makes this one of the important initiatives of the Department. In essence, what is happening is—

Senator COCHRAN. What is that that you referred to?

Dr. HORN. The departmental IPM initiative calls for having 75 percent of our acreage under IPM control systems by the year 2000. This is an effort to reduce the use of chemical pesticides in favor of alternative—

Senator COCHRAN. That is not a directive of the farm bill or any other legislation?

Dr. HORN. No; this is something that was announced as a USDA initiative.

FARMLANDS UNDER IPM

Senator COCHRAN. How much of the farmland right now is under integrated pest management practice?

Dr. STAUBER. Approximately 50 percent. This is not all farmland, it is simply crop acreage.

Senator COCHRAN. OK. We are talking about adding an additional 25 percent? Is that what you are saying?

Dr. STAUBER. Yes, sir.

Dr. HORN. Yes.

Senator COCHRAN. Do you think the farmers know that 50 percent of their land is under integrated pest management? If they had heard Dr. Robinson explain what it was, do you think they would be surprised that that was something that was already being done on one-half of their farmland?

Dr. STAUBER. It almost depends on the part of the country. I mean, if we were out talking to potato producers—

Senator COCHRAN. To who?

Dr. STAUBER. Potato producers. Or if we were talking in a Wisconsin or a Maine or an Idaho, there is a huge IPM initiative underway, focused on potato late blight. The potato industry is very up to date and knowledgeable. You say IPM to a potato producer and they are almost always going to know exactly what you are talking about. Similarly, with vegetable producers in Florida and in California, IPM is very well understood.

On the other hand, if you talk to cotton producers, they may, in fact, well be using IPM technologies as they are critical to certain eradication programs that we have had underway, but they may not ever have called it IPM. We are less worried about what they call it, and more worried about whether or not it is going on and whether or not it is profitable.

Dr. HORN. Senator Cochran, as you would know, we have had some of the best entomologists in the world in ARS and in the Department. In essence, what they have told us is that the continued use of chemical pesticides cannot ultimately work.

We seem to be coming to the point where we apply those at economic levels, which means the pest populations are high. We frequently develop resistance, and the costs of clearing new chemicals for new uses continues to increase.

The suggestion is that some combination of predators and parasites, cultural practices, and pesticides be used in a concerted way over large areas in order to keep pests under control at economic levels and/or to eradicate them. This is a fairly sophisticated system, but it does depend on the day-to-day activities of individuals, particularly in certain parts of the South.

I know you are aware of what is going on in the cotton industry. This has become a very popular undertaking. Although there has been a trial-and-tribulation environment in the past year or two, this is really the only long-term solution to our problems.

Senator COCHRAN. Well, I am very anxious to see some solutions developed. I know that there have been over a long period of time research projects undertaken at Stoneville and in the Mississippi Delta particularly. I am aware of that, and have been briefed on some of the work there and witnessed what they are doing. I think that is an important area of activity.

Last year, we had a huge disaster, as you know, in the Southeast, not so much in the Mississippi Delta itself, but in the hills, and in the prairie area of our State, and Texas had some serious problems. Coupled with the unusually hot weather conditions and dry conditions, it just went from bad to worse.

Quickly farmers were scrambling to try to save their crops. They ended up spending enormous sums on pesticide applications to try to deal with beet armyworm and the tobacco budworm. Many of them spent more than they were able to realize in the sale of whatever cotton ended up being produced.

The need? It was illustrated right there, you know, for anybody who wanted to talk about how you would try to convert this research into usable information or different techniques that would serve as a prime example of what we are trying to do.

BT COTTON

I wonder how much attention is being paid by the researchers at USDA to the new strains and the development of Bt cotton as an example? I cannot ever remember how to say that big word that Bt stands for, but it offers a great deal of promise. You know, this is a strain of cotton seed that develops a plant that is resistant to pests, and you do not have to spray it.

The engineering, the biological engineering, that has been done has provided enormous good news. Did this research start at USDA, or was that privately done? I know Monsanto and Delta Pine & Land Co. have been actively involved in a joint venture on this. Can you claim any credit for that?

Dr. HORN. We certainly can. We did do the original work identifying *Bacillus thuringiensis* as a producers of toxins that could be used to control insect pests. In fact, the first set of studies dealt with extracting that toxin and trying to spray it on plants. Oftentimes, it would kill insects but frequently too late to keep them from reproducing.

The Monsanto activity came about when they found how to insert genes into plants and they took that particular gene that was identified for production of the toxin and they injected it, in this case, into a commercial cotton variety. The plant itself generates the toxin that was formerly generated by the bacteria, and that is what kills the insect now as they feed.

CONFERENCE ON BT CROPS

We have just had a conference on this topic in the last 3 weeks. The whole question of insect resistance is a very challenging one when you are doing something at such an extensive scale. We are

talking about potentially millions of acres of cotton, millions of acres of corn, and huge areas of potatoes. Those are the three Bt crop varieties that are approved for commercial use this year.

Our conference brought together representatives of industry, commodity organizations, the environmental community, farmers, and the research community to talk about how we manage and conduct research on insect resistance on this large scale in order to make sure that the Bt remains a successful deterrent to insects for the longest period of time.

Maintaining the success of Bt is clearly in the economic interest of companies like Monsanto and Delta Pine & Land Co. It is clearly in the best interest of the country since it is a very positive alternative to certain pesticide uses.

What we also need to do is to make sure that we are using Bt in a way that is in the interest of the individual producers, so that they are not managing their fields to maximize their yield in a manner that could potentially harm the long-term viability of Bt.

It is a complex and very challenging set of research questions. We had an excellent exchange on this at the conference. In close cooperation with our allies in the land-grant community, this discussion will probably change the scale and the nature of some of the work that we do over the next 3 to 5 years to make sure that maximum benefit is provided by Bt.

CENSUS OF AGRICULTURE

Senator COCHRAN. There are a couple of questions that I wanted to ask about the census of agriculture. There is a funding reduction faced by the Bureau of Census, and it designated the census of agriculture as a lower priority. The President's budget recommends a transfer to the National Agricultural Statistics Service of the census of agriculture. That is what my understanding is. That is part of the fiscal year 1997 funding request.

What is the likelihood that we can handle that, Mr. Bay? Are there funds available or requested in your budget request that will permit you to deal with this transfer proposal? I do not see how we are going to come up with \$17.5 million, which I understand is required to take on this new responsibility.

Mr. BAY. Senator, we hope that there is some way that there will be a transfer of the funding as well as the responsibility. There would not be \$17.5 million in NASS's budget unless we get the transfer from the Census Bureau. This is a proposal which we think is a very positive way to make Government work better. It really puts the two agricultural statistical organizations together, and it eliminates the problem of people reporting to two different Federal agencies on their agriculture information.

I think it would make it so that we could continue some of the programs that the Census Bureau was going to discontinue such as the follow-on censuses on irrigation and horticulture specialties. It will make it possible to keep the definition of a farm at \$1,000 instead of changing it to \$10,000.

Senator COCHRAN. Yes; that would really have an effect in our State, and I understand in a couple of other States too, West Virginia, for example.

Mr. BAY. We have heard from a lot of States.

Senator COCHRAN. Arkansas, Texas.

Mr. BAY. Correct.

Dr. STAUBER. Mr. Chairman, transfer of the census is critical and have to have both legs of this being. If we get the authority without the funds, we are not able to do it. If we get the funds without the authority, we are not able to do it. We are trying to work through both issues. Any assistance and guidance that you could provide us in that regard would be greatly appreciated.

SUBMITTED QUESTIONS

Senator COCHRAN. We will work with you on it. I am glad to know it is a priority to be resolved in a way that recognizes the interest. Mississippi would be a big loser, and I would not like that. I think it would, if we let this definition be changed. We will work with you on that. I have some other questions about the census and the other issues under the jurisdiction of NASS, and I will submit those.

We have had a good discussion this morning. I appreciate your patience with our questions and your cooperation with the subcommittee. I hope you will not find these questions too tedious. We are trying to get a basis in the record for decisions that will make good sense for the long term and help address some real needs out there and concerns that we have in production agriculture and among the general public at large. We recognize those as important aspects of our decisionmaking process as well.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

AGRICULTURAL RESEARCH SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

NATIONAL AGRICULTURAL LIBRARY

Question. Please describe the programs carried out by the National Agricultural Library (NAL). These include the Rural Information Center, Water Quality Information Center, Animal Welfare Information Center, Technology Transfer Information Center, Plant Genome Information Center, Food and Nutrition Information Center, and the Biotechnology Information Center.

Answer. The programs carried out by the Rural Information Center (RIC), the Water Quality Information Center (WQIC), Animal Welfare Information Center (AWIC), Technology Transfer Information Center (TTIC), Plant Genome Data and Information Center (PGDIC), Food and Nutrition Information Center (FNIC), and the Biotechnology Information Center (BIC) are described as follows:

The RIC, established in 1987, provides information and referral services to local government officials, community organizations, health professionals and organizations, rural electric and telephone cooperatives, libraries, businesses, and rural citizens working to maintain the vitality of America's rural areas.

The WQIC was established in 1990 as part of the USDA's coordinated plan to address water quality concerns. As the focal point of NAL's water quality efforts, WQIC collects, organizes, and communicates scientific findings, educational methodologies, and public policy issues related to water quality and agriculture. The center supports the diverse information needs of users concerned with the quality and quantity of water resources.

The AWIC was created in 1986 in response to a mandate in the 1985 Animal Welfare Act amendments. The Act provides regulatory authority to ensure the proper care and treatment of animals used in biomedical research, in teaching, in exhibition, and by dealers who provide animals. AWIC conducts workshops which assist researchers in understanding and complying with the Act. The AWIC produces and distributes a variety of publications including bibliographies, resource guides, fact sheets, and a newsletter which provides articles focusing on animal care and use, alternative models for research and education, and regulatory issues.

The TTIC was established in 1989 as a vehicle to "get results of research into the hands of those individuals and organizations who can put it into practical use." TTIC assists USDA personnel by locating information they need and also by promoting new products and processes they develop. TTIC also helps individuals and firms locate the technology they need.

The PGDIC was established in 1991 as part of the USDA Plant Genome Research Program. A database has been created to help manage the information needs of the genome research community. The center supports the development of and public access to this resource which is available through the Internet and the World Wide Web.

The FNIC was established in 1971 as a national repository of training materials for USDA Child Nutrition Program professionals. Today, FNIC assists all individuals interested in food and human nutrition. Nutritionists and information specialists help consumers, educators, health professionals, the media, researchers, and others locate information and resources.

The BIC provides access to a wide range of information services and publications covering all aspects of agricultural biotechnology. The center assists patrons in obtaining general information on current endeavors in research, education, government regulations, and international markets as well as information regarding organizations and public attitudes toward biotechnology.

Question. What are the resources currently committed to these programs?

Answer. For fiscal year 1996, the resources committed directly to these information centers are: Rural Information Center, \$459,000; Water Quality Information Center, \$247,000; Animal Welfare Information Center, \$711,000; Technology Transfer Information Center, \$227,000; Plant Genome Data and Information Center, \$419,000; Food and Nutrition Information Center, \$699,000; and the Biotechnology Information Center, \$172,000. Additional resources are expended indirectly in support of the centers for a total complement of information products, systems and services provided by other units of the Library.

Question. Discuss the impact of these programs and their future direction.

Answer. These programs provide in-depth coverage of specific subject areas relating to the food and agricultural sciences. They help a diverse audience meet their growing information needs by: providing reference services; producing information products; helping to develop research collections; providing outreach services such as workshops on information sources and information gathering techniques, and networking activities. Their future direction is closely linked to NAL's Electronic Information Initiative with the overall goal of making the services and products resulting from these programs increasingly available in electronic form through the Internet and the World Wide Web.

Although not an Information Center, another program in which NAL will contribute its expertise in enhancing access to subject-specific information is the USDA History Collection. This collection is being transferred from the Economic Research Service to the Library. With the financial assistance of the seven USDA mission areas, NAL will process and make available electronically, portions of the history collection and provide ongoing reference services from it.

Question. Provide the NAL appropriations and staff year levels for Fiscal Years 1995, 1996, and 1997.

Answer. The NAL appropriation and staff-year levels for fiscal years 1995, 1996 and 1997, respectively, are as follows: \$18,307,000, \$19,464,000, and \$19,487,000 in appropriations; and 195, 209, and 204 in staff years.

Question. Describe the major organizational components of the NAL, and provide respective funding and staffing levels of each for the current fiscal year.

Answer. The NAL has 4 major organizational components:

The Office of the Director provides leadership and general support and building services for the NAL.

The Technical Services Division selects and acquires the agricultural and agriculturally-related literature for the collection and provides bibliographic and subject access to the agricultural literature.

The Public Services Division facilitates access to the information and materials needed by researchers, scientists, educators, administrators and the general public through a variety of general and specialized information services, document delivery services, and instructional programs.

The Information Systems Division is responsible for the automation activities of NAL.

The funding and staffing for each component is as follows:

Office of the Director -	\$4,781,000, 14 FTE
Technical Services Division -	\$6,490,000, 88 FTE
Public Services Division -	\$5,932,000, 82 FTE
Information Systems Division -	\$2,261,000, 30 FTE

NAL OBLIGATIONS BY OBJECT CLASS

Question. Provide a breakdown of the NAL 1995 obligations by objective class.

Answer. A breakdown of NAL 1995 obligations by object class is provided for the record as follows:

<u>Object Classification</u>	FY 1995 Actual (\$000)
<u>Personnel Compensation</u>	
11.1 Permanent positions.....	\$7,364
11.3 Positions other than Permanent.....	249
11.5 Other personnel compensation.....	<u>72</u>
Total, Personnel Compensation.....	7,685
12.0 Personnel benefits:	
civilian retirement.....	1,570
13.0 Former employees.....	<u>18</u>
Total, Object Classes 11-13.....	9,273
<u>Other Obligations</u>	
21.0 Travel and Transportation of persons.....	143
22.0 Transportation of things.....	82
23.3 Comm., util, other rents.....	924
24.0 Printing and reproduction.....	219
25.2 Other services.....	1,791
25.3 Purchases of goods and services.....	391
25.4 Operations & maintenance of facilities....	774
25.5 Research & development contracts.....	992
25.7 Operations & maintenance of equipment....	207
25.8 Subsistence & support of persons.....	10
26.0 Supplies & materials.....	611
31.0 Equipment.....	2,343
41.0 Grants, subsidies and contributions.....	<u>482</u>
Subtotal, All Other.....	8,969
Total.....	<u>18,242</u>

Question. List and describe the service contracts engaged in by NAL and their costs.

Answer. In FY 1996 NAL has three service contracts. Counter Technology, Inc. provides guards to protect the NAL facility, collection and employees (\$209,000), Beautify Professional Cleaning Service, Inc. provides cleaning and trash service (\$323,360). Associated Management Services handles mailroom services, pickup, and delivery (\$117,000).

Question. What is the annual maintenance cost of the Beltsville NAL facility?

Answer. NAL has a budget of \$900,000 per year to conduct its annual repair and maintenance operations.

Question. How are these costs financed?

Answer. These costs are financed from appropriated funds.

Question. In FY 1996, NAL received additional appropriations for electronic storage and materials preservation. How are these funds being implemented.

Answer: The funds NAL received in FY 1996 for electronic storage and materials preservation (\$500,000) are being implemented with a view toward instituting a systematic storage and preservation program according to nationally recognized standards. Key areas of development in FY 1996 include: establishment of a preservation officer position; digital preservation of key Federal agricultural documents; analysis and determination of long-term preservation and access issues relating to microform holdings; and the development of criteria for a national agricultural literature archive.

Question. Please identify NAL users by program and the frequency of users of NAL's various data bases, services and publications. Provide a comparison of this data to that of 10 years ago.

Answer. NAL serves the agricultural information needs of a variety of users, including researchers, educators, administrators, extension agents, students and farmers. NAL data bases are made widely available to users. All users are eligible for NAL basic services (such as Reference and Document Delivery) and may request NAL publications.

Ten years ago NAL's bibliographic database AGRICOLA was available to the public only through two commercial online services. In addition to three commercial online services, and several university networks, AGRICOLA is now available commercially on CD-ROM. NAL also offers World Wide Web-based versions of its Plant Genome Databases, its integrated library system, and a number of World Wide Web(WWW) homepages, as well as CD-ROMs on a number of agricultural subjects. Because public access to AGRICOLA has been through the private sector, NAL does not have usage statistics. NAL's WWW statistics are included in the following answer.

Reference and Document Delivery are the most requested NAL services. In fiscal year 1995 NAL staff answered 52,000 reference questions and delivered 157,000 documents. Comparable numbers for fiscal year 1985 were 24,000 and 228,000, respectively. In providing services NAL staff distributed 101,000 substantial publications in 1995; comparable data for 1985 are not available.

Question. NAL Selected Examples of Progress refer to the NAL World Wide Web Home Page established in FY 1995. Who is using this new access, for what purposes and how often?

Answer. NAL does not keep detailed information on its electronic users, nor on the purpose of their usage. Total accesses to NAL's electronic documents/databases totaled 796,000 for FY 1995 and we estimate a total of 1.2 million accesses in FY 1996.

Question. Is this access creating more demand on library services?

Answer. Yes, this access is creating more demand on library services, particularly in the area of reference services.

Question. Do these represent costs savings over previous access procedures and by how much?

Answer. It is difficult to compare the cost of previous access procedures with the level of access afforded through the NAL World Wide Web Home Page. By making information available through the Worldwide Wide Web, it is more accessible, by orders of magnitude, than it would be otherwise. In this sense, the cost per access would be less than what was previously possible.

Question. How does NAL interface with other major libraries in the U.S. and abroad?

Answer. NAL collaborates with other major libraries to carry out its mission of ensuring and enhancing access to agricultural information. NAL has special agreements with the Library of Congress, the National Library of Medicine, land-grant university libraries, and international agricultural and scientific libraries and information centers to share information and bibliographic data. NAL participates in several organizations that address information policy and cooperation issues, such as the U.S. Agricultural Information Network, the Association of Research Libraries, and the American Library Association.

Question. Could you identify the subjects and various modes of exchange such as panels, symposia and other meetings ARS or NAL directors have participated in FY 1995 and 1996 to date.

Answer. In FY 1995 and FY 1996 to date, the NAL director has participated in the following meetings that pertain to interactions with other major libraries in the U.S. and abroad.

FY 1995

Month/Year	Name of group (subject/role)
1/95	International Association of Agricultural Information Specialists (International cooperation; Keynote speaker, board member)
2/95	American Library Association Midwinter Meeting (NAL update presentation)
3/95	Online Computer Library Center Conference of Research Library Directors (Research library cooperation)
4/95	United States Agricultural Information Network Conference (National cooperation; NAL update presentation)
5/95	Association of Research Libraries Membership Meeting (Research library cooperation)
6/95	Special Library Association Annual Meeting (Special library cooperation; NAL update presentation)
6/95	American Libraries Association Annual Meeting (NAL update presentation)
7/95	Meeting at NAL with directors of 9 land-grant university libraries (Strengthening NAL/land grant cooperation)

FY 1996

11/95	National Association of State Colleges and Land-Grant Universities (Role of information in land grants; Presentation)
1/96	American Library Association Midwinter Meeting (NAL update presentation)
3/96	Online Computer Library Center Annual Research Library Director's Meeting (Research library cooperation and electronic information)
4/96	Association of Agricultural Administrators Biennial Meeting (1890 libraries; presentation)

ANIMAL WELFARE INFORMATION CENTER

Question. What is the status of the Animal Welfare Information Center at the National Agricultural Library?

Answer. The Animal Welfare Information Center is one of ten information centers at NAL. In 1986, Congress appropriated \$750,000 to the Animal and Plant Health Inspection Service (APHIS) to be transferred to NAL for an "information service." These funds became part of the NAL base budget in FY 1989. No additional appropriations have been received for the animal welfare information program since AWIC was created 10 years ago. Although these funds have been eroded by inflation and mandated budget reductions, and no longer buy the level of goods, services, and salaries that they did in 1986, NAL will continue to support the AWIC within available resources.

Question. What amount of funding and number of staff years is included in the FY 1997 request for the Center?

Answer. No additional funds or staff years were requested for the Animal Welfare Information Center in the FY 1997 budget request. In FY 1997, NAL will continue to fund the Center within available resources currently at \$711,000 and 6 staff years.

Question. How do these levels compare to funding and staffing for the Center in each of the previous five fiscal years?

Answer. Here are comparable figures for the Center for FY 1992-96:

	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
Funding	\$711,000	\$725,000	\$732,000	\$709,000	\$711,000
Staff Years	7	7	7	6	6

Question. Who controls funding appropriated for the Animal Welfare Information Center--the Center or the library?

Answer. The Director of the Library, as fundholder, is responsible for these funds. The Animal Welfare Information Center manages the resources allocated to it.

Question. Does the Center have discretion over the use of its funds?

Answer. A large portion of the allocation for the Center is committed to salaries and other fixed costs. For the non-fixed costs, the Center has discretion over the use of its funds. Each year, the Center Coordinator prepares a budget plan which is reviewed and approved by the Director, NAL, along with budget plans of other fundholders.

Question. Does the ARS support the information center concept?

Answer. Yes, ARS supports the information center concept as an effective means of delivering information. NAL has a long history of utilizing the information center concept in order to provide specialized information services in the food and agricultural sciences. By way of example, NAL's first information center, the Food and Nutrition Information Center, has been in continuous operation since 1971.

Question. Are there proposals to alter the mission of the Center or to eliminate its staff and absorb it into the Library, i.e., to use reference librarians rather than subject specialists which now provide the Center's special services?

Answer. There are no plans to alter the mission of the Center or to eliminate NAL subject specialists. NAL is conducting a library-wide program review in response to Government downsizing requirements. The Center, as part of NAL, will continue to be served, as it is presently, by subject specialists, librarians, computer specialists, and library technicians, all of whom play an important role in supporting the animal welfare information effort.

Question. Is the Animal Welfare Information Center now being required to bid for funding for its publications? What assurance is there [that] the newsletters and other publication, and the staff specialists will be there to provide this information?

Answer. The Animal Welfare Information Center newsletter and most other publications are printed in-house, through USDA. The Center is required to identify its publications needs each year as are all other program areas of the Library. The publication and staffing levels will continue to the extent of the purchasing power of available resources.

OBJECT CLASS

Question. The actual full-time equivalents for 1995 and 1994 are well below the agency's authorized ceiling for those years. Please explain.

Answer. The President's fiscal year 1995 budget proposed closure of 20 research locations. Hiring during fiscal year 1994 was curtailed and vacancies were held open to allow employees affected by proposed location closures maximum placement opportunities. In addition, former Secretary Espy placed a freeze on all new hires outside of USDA and froze personnel actions on grade 13-15 positions. The carryover of this action caused the agency to start fiscal year 1995 with a large number of vacancies. Final Congressional action directed the closures of 10 locations and 2 programs in fiscal year 1995. The locations which did not

close began the year with a significant number of vacancies. The agency offered early retirement to eligible employees in both fiscal years 1994 and 1995 as part of the Agency's efforts to comply with the Administration's streamlining initiative. This action produced additional vacancies and further reduced FTE usage causing the total FTE for the fiscal years to be below the ceiling levels.

Question. Please provide a detailed breakdown of your equipment purchases in FY 1995. Please distinguish scientific or laboratory equipment purchases, computer and related costs and other major purchases.

Answer. The detailed breakdown of equipment purchases in FY 1995 distinguishing scientific or laboratory equipment purchases from computer and related costs and other major purchases, are as follows:

Motor Vehicles, Fleet Equipment	\$ 1,225,596
Machinery & Equipment (incl. Heavy Vehicles)	626,273
Laboratory/Scientific Equipment	25,086,135
ADP Equipment & Software	8,870,809
Office Machines/Telephone/Reproduction Equip.	961,568
ADP Equipment/Software - Personal Computers	1,162,818
Miscellaneous Equipment	<u>267,929</u>
Total	38,901,128

Question. How much money was obligated for consultant services in 1995?

Answer. There was no money obligated for consultant services in 1995.

Question. Please provide a detailed breakdown of obligations incurred in the area of Other Services: Contracts for research services, contracts for administrative services, etc.

Answer. A breakdown of FY 1995 obligations is as follows:

<u>Description</u>	<u>Obligations</u>
Contractual Services Performed by Other Federal Agencies (i.e. janitorial, design center, video and film center, civil defense, NFC Services - Greenbook, etc.)	\$ 7,712,410
Personnel Related Expenditures (i.e. storage of household goods, security investigation charges, health units, training, tuition, fees, etc.)	2,474,624
Repair, Alteration, or Maintenance of Equipment, Furniture, or Structures	34,029,265
Contractual Services - Other (Other Research Services, Architectural and Engineering, flying services, etc.)	36,101,882
Agreements (i.e., Research Support Agreements)	32,172,440
Miscellaneous Services (OMB Circular A-76 Contractual Services, Other Non-Travel Expenses Reimbursed on Voucher, Audit and Legal Fees, etc.)	4,353,221
Construction Contracts	<u>1,012,261</u>
Total Other Services Obligations	117,856,106

Question. Provide a breakdown of the costs associated with Personnel Benefits in 1995.

Answer. A breakdown of FY 1995 obligations is as follows:

Description	Obligations
FEHBA - Agency Contribution	\$17,201,486
CSRS Retirement (7%) Coverage	11,825,885
Bureau of Employment Compensation (Office Workers Compensation)	3,080,906
Hospital Insurance Tax Contribution	4,524,737
FERS Contributions	13,829,952
Full OASDI Contributions - FERS	7,579,135
TSP Government Basic Contribution	1,140,350
TSP Government Matching Contribution	3,604,254
Relocation Services Program	1,421,877
Other Various Personnel Benefits	<u>5,197,825</u>
Total FY 1995 Benefits	69,406,407

FUNDS AND RESEARCH MANAGEMENT

SALARY LAPSE

Question. In 1995, ARS was under its personnel ceiling by some 300 full-time equivalents. How much money budgeted for compensation for these positions was saved by your agency?

Answer. In 1995, \$19 million budgeted for compensation was saved due to ARS being below ceiling.

Question. What was done with these savings?

Answer. The fiscal year 1995 accrued savings were used as follows (dollars in thousands):

Location Closures Costs 1/	\$4,642.7
Research Grants & Agreements, Agency-wide 2/	1,369.0
Research Equipment, Agency-wide 2/	819.9
ADP and Other Infrastructure Upgrades	1,004.1
Remove/Replace Underground Storage Tanks, Beltsville, MD	963.5
Hazardous Waste Cleanup, Agency-wide 2/	284.0
Radiological Waste Disposal Site, Beltsville, MD	224.0
DNA Sequencers (2)	
Environmental & OSHA Audits, Beltsville, MD	150.0
Technology Assessment Pilot Project and Evaluation	148.6
Apple Scab IPM Project	129.9
Retrofitting Biological Safety Hoods, Mid West Area	120.0
Retrofit Laboratory Gas Line, Boston, MA	115.0
Empowerment Zone/Enterprise Community Evaluation Project with National Center for Appropriate Technology and U. of TN	100.00
Asbestos Abatement, Clay Center, NE	100.00
Rebuild Hazardous Waste Storage Facility, WRRRC, Albany, CA	95.0
Safety and Hazard Abatement, Peoria, IL	85.0
Site Assessment, Phase II, Yakima, WA	77.0
High Pressure Liquid Chromatograph	<u>65.0</u>
Subtotal	10,722.7

1/ Includes severance pay, relocation costs, facility operating costs (including security) until closure, Hazardous Waste Cleanup assessment and remediation, and transfer of equipment and other property.

2/ Individual projects having a value of less than \$65,000.

The balance of accrued lapse was maintained at the field locations. The primary uses of these funds were for research equipment, employee relocations, facilities repair and maintenance, safety and health improvements, and unanticipated operating needs.

Question. To what extent were these funds obligated at the locations where they were saved?

Answer. Approximately, 40 percent of the funds saved were obligated at the locations where they were saved. The remaining 60 percent was used for Agency priorities not necessarily at the location where the funds were saved. An example of this would be the funding provided for location closures; no savings occurred at these locations, however, funds were obligated at these sites for closure costs.

SCIENTISTS AND RESEARCH PROJECTS

Question. How many active projects does ARS currently engage?

Answer. Approximately 1179 individual research projects are in progress at this time.

Question. How many scientists are currently on-board?

Answer. There are 1,855 permanent career scientists on board.

Question. How many of these projects involve more than one scientist's time?

Answer. Most of the ARS projects have more than one scientist assigned to a project either on a full or part time basis. Similarly, a single scientist may be named to more than one project.

Question. When a scientist is involved in more than one research project, how is his time and funding planned?

Answer. The National Program Staff determines the funding level for each project based on Congressional direction, customer needs, and the amount of funds needed to carryout a research project. The National Program Staff in conjunction with the scientist and line managers assign the amount of time that a scientist devotes to each project based on the expertise needed and funds available.

Question. Please explain how the Agency monitors scientists' planned time and funding on these projects.

Answer. Each year research managers prepare a detailed plan for utilization of the resources, funds and personnel, for each individual project. The plans are reviewed and approved by the Administrator at the beginning of each fiscal year. After the plans are approved, it is the responsibility of the line managers to ensure that the approved plans are followed by the scientist throughout the year. At the end of each fiscal year, the Agency monitors expenditure data for each project to ensure that the plans were followed as approved. The plans can be modified throughout the year as unforeseen needs arise if approved by the National Program Staff on behalf of the Administrator.

Question. Dr. Horn's written testimony asserts a significant erosion in the number of ARS scientists. Provide the Committee with the record of scientists employed by ARS over the past 20 years.

Answer. ARS no longer has employment statistics for the years prior to fiscal year 1986. Development and use of emerging technology by both the National Finance Center's Payroll/Personnel systems and ARS has permitted the agency to capture a snapshot of end-of-year employment information beginning with fiscal year 1986. The following table provides end-of-year employment data from fiscal year 1986 through fiscal year 1995.

Fiscal Year	No of SY
1986	2,470
1987	2,391
1988	2,338
1989	2,277
1990	2,200
1991	2,134
1992	2,116
1993	2,056
1994	1,969
1995	1,906

Question. What are your plans to stop the scientist loss or indeed, reverse this trend?

Answer. I intend to achieve savings in overhead and administrative costs to the maximum extent possible to return funds to the research program. A vital part of achieving these savings will be to consolidate our research programs at locations where appropriate facilities may be currently under-utilized. I intend to consolidate programs as part of requesting funds for construction of new facilities to replace many outdated facilities. Also, I hope to convince the Administration and the Congress of the increased need for agricultural research so that additional funds may be available through the appropriation process.

EXTRAMURAL FUNDING

Question. Please list the funding ARS commits to Land Grant Universities. Please identify these amounts by recipient.

Answer. A list of funding committed to Land Grant Universities follows:

SCHOOL	FY 1995
Alabama Agri & Mech College	\$ 45,000
Alcorn State (MS)	210,000
Auburn Univ	52,000
Clemson Univ	7,000
Colorado State University	353,000
Cornell University	644,000
Iowa State Uni	367,000
Kansas State Univ	204,000
Kentucky State Univ	13,000
Louisiana State Univ	329,000
Michigan State University	370,000
Mississippi State University	1,022,000
Montana State Univ	425,000
New Mexico State Univ	523,000
North Carolina State University	872,000
North Dakota State Univ	128,000
Ohio State Univ	392,000
Oklahoma State University	228,000
Oregon State University	474,000
Pennsylvania State Univ	45,000
Prairie View A&M College, Texas	10,000
Purdue University	630,000
Rutgers University	67,000
South Dakota State Univ	25,000
Southern Univ	210,000
Texas A&M University	842,000
Univ of Arizona	305,000
Univ of Arkansas	332,000
Univ of California	1,931,000
Univ of Connecticut	80,000
Univ of Florida	1,181,000
Univ of Georgia	515,000
Univ of Hawaii	1,245,000
Univ of Idaho	455,000
Univ of Illinois	450,000
Univ of Maryland	1,344,000
Univ of Massachusetts	86,000
Univ of Minnesota	131,000
Univ of Missouri	434,000
Univ of Nebraska	496,000
Univ of Tennessee	65,000
Univ of Vermont	45,000
Univ of Wisconsin	557,000
Univ of Wyoming	68,000
Utah State University	113,000
Virginia Polytechnic Univ	25,000
Washington State Univ	834,000
West Virginia Univ	<u>4,000</u>
TOTALS	19,183,000

Question. Please identify other extramural recipients of ARS research contracts.

Answer. In FY 1995 ARS committed \$8.48 million to Tufts University and \$3.98 million to Westat Inc. for research contracts.

GENERAL REDUCTIONS

In 1996, the Committee directed that general reductions be taken across each program, project and activity.

Questions. What was the magnitude of the 1996 general reduction.

Answer. In FY 1996, ARS implemented a general reduction equivalent to .9 of a percentage or amounting to \$8.4 million.

Question. Explain how this was implemented?

Answer. The general reduction was implemented by an across the board assessment of each research project.

OBLIGATIONS FOR NEW CROPS & PESTS

Question. Provide for the record 1995 obligations incurred and your current 1996 funding estimates for the following areas of research: cuphea, canola, hops, kenaf, guayale, lesquerella, sunflowers, filberts, blueberry, pears, peaches and apples. Similarly, provide the Committee with information on the pests: bollworm, bollweevil, cornearworm, diaprepes, beet armyworm, fire ant, and gypsy moth.

Answer. Obligations incurred for FY 1995 and FY 1996 estimated funding for crops and pest research are provided as follows:

Crops and Pest Research

	FY 1995 <u>Obligations</u>	FY 1996 <u>Funding</u>
Crops:		
Cuphea	\$264,642	\$276,300
Canola	225,483	173,000
Hops	390,771	392,200
Kenaf	1,321,169	1,651,400
Guayule	466,052	457,100
Lesquerella	579,706	567,800
Sunflower	2,577,056	2,580,800
Filberts	298,693	205,100
Blueberry	1,972,317	1,999,900
Pears	2,479,984	2,824,600
Peaches	4,018,773	3,716,400
Apples	7,188,849	8,058,600
Pests:		
Beet Armyworm	\$633,476	\$927,600
Boll Weevil	3,170,460	1,901,400
Boll Worm/ Corn Earworm	5,446,829	5,229,100
Diaprepes	11,524	411,400
Fire Ant	1,278,788	1,181,600
Gypsy Moth	2,190,328	2,415,400

FORECASTING MODELS

Question. Colorado farmers are getting daily reports on irrigation needs and pest problems by satellite. You state "scientists pour over scouting information in the afternoon" to incorporate into forecasting models. Whose scientists are doing this and what kind of information is scouted?

Answer. Extension specialists and commercial scientists (consultants) analyze the data and provide the forecasts. The scouted information and data include all types of data normally obtained in the scouting process. Examples are pest populations, evidence of diseases, nutrient and pH levels, and water status of soils--any data that might be required to evaluate environmental stresses to which crops may be exposed.

Question. What is the source of this information?

Answer. ARS began a system to transmit scouting information to Extension and consultants, but turned it over this year to the Colorado State University Climate Center, which places the information on the Internet. The private sector Data Transmission Network includes the information in a large array of management decision-supporting information it provides to its subscribers.

Question. How long has this program been underway?

Answer. The cooperative program began 5 years ago.

Question. What is the cost to subscribers?

Answer. There is no cost to the farmer or consultant who obtains the information from the Internet. A subscriber to the Data Transmission Network pays \$30 per month, but obtains much more information than that referred to by these questions. Certain other costs, such as purchase of necessary weather stations, have been borne by soil conservation districts, the Cooperative Extension Service, and others.

Question. How effective is this decision tool?

Answer. A recent survey by the Cooperative Extension Service indicated a high level of satisfaction among on-farm users of the service.

SELECTED EXAMPLES OF RESEARCH PROGRESS

FOOT AND MOUTH DISEASE

Question. Scientists at the ARS Plum Island laboratory have constructed a strain of foot-and-mouth disease (FMD) virus that will allow the U.S. to produce and stockpile safe FMD vaccine for use in case the disease is introduced into the U.S. This new strain of FMD virus is not infectious. How would USDA utilize this vaccine prior to or after an outbreak of FMD on the U.S. mainland?

Answer. The new vaccine is a genetically altered strain of the FMD virus. Through new collaborations with Brazil, where FMD is still endemic, we will be able to field test this vaccine. Concurrently, ARS will concentrate on developing diagnostic tests that will distinguish natural infection from the animals vaccinated with the genetically engineered virus. If these vaccine field trials conducted in Brazil provide protection, the new FMD vaccine would be transferred to APHIS for license approval. This vaccine would be used by the Animal and Plant Health Inspection Service in the event of a FMD outbreak in the U.S. to protect cattle from infection.

Question. What other measures would be involved?

Answer. If a FMD outbreak occurred in the U.S., animals from infected herds would be depopulated. Adjacent herds would be vaccinated to prevent the spread of the virus.

STEAM VACUUM TECHNOLOGY

ARS researchers at Clay Center, Nebraska, have provided the scientific information required to permit FSIS approval of a "steam vacuum" technology for beef processing industries.

Question. What is the status of this technology?

Answer. The FSIS has approved steam vacuuming to remove fecal and ingesta contamination less than one inch in its greatest dimension without the necessity of carcass trimming.

Question. Is it being implemented?

Answer. This technology is being implemented in beef slaughterhouses and is used on millions of beef carcasses in lieu of manual knife trimming to remove contamination.

LOW FAT CHEESE

Question. Do ARS scientists have a patent on low fat cheese?

Answer. A patent application for a method of making low fat mozzarella cheese is currently under examination in the United States Patent and Trademark Office. A different, unpatented, method was also developed to make another version of low fat mozzarella. This method provided a fat content even lower than part-skim

mozzarella cheese, but with acceptable melting characteristics. Cheese manufactured based on modifications of the latter method is being supplied to the National School Lunch Program.

Question. Has ARS utilized a cooperative research agreement in its development of this product?

Answer. No, the method for making this low fat cheese product was developed solely by ARS scientists as part of a fundamental research project on milk enzymes. No cooperative research agreement was involved.

Question. Are private companies involved in marketing this low fat cheese?

Answer. ARS worked with the USDA's Food and Consumer Service to establish specifications for low fat mozzarella cheese for inclusion in the National School Lunch Program. The cheese was tested initially as a pizza topping in Philadelphia area schools, and then more broadly in schools in the Midwest. Based on this cooperation, the Food and Consumer Service contracted with three companies to make a low fat mozzarella for the National School Lunch Program. More than 1.7 million pounds of the cheese have been produced under the contract.

PREVENTION OF CHRONIC DISEASES

Question. Your example, "antioxidant deficiency in the host alters make-up of a virus" suggests a revolutionary role for nutrition in prevention of chronic diseases. Please expand, for the record, the results and implications of this investigation.

Answer. Emerging infectious diseases, especially those caused by viruses, pose a serious threat to the public health. Awareness of this problem in the general population has been heightened by the recent publication of best-selling books and the release of hit movies that have emphasized this theme. Many factors can contribute to the appearance of new infectious agents, but the effect of nutritional well-being on the ability of the host to resist viral infection has received relatively little attention. Work at the Beltsville Human Nutrition Research Center, Beltsville, MD, in collaboration with the University of North Carolina, has shown that nutritional deficiency of either vitamin E or selenium increases the heart muscle damage caused by a certain virus in mice. The mouse model used in these studies is thought to be an excellent mimic of human viral-induced heart muscle disease. Moreover, a strain of the virus that causes no damage in normal mice nonetheless damaged the hearts of deficient mice. Furthermore, isolation of the formerly benign virus from a deficient mouse revealed that the virus had mutated to a more virulent form as a consequence of replicating in the nutritionally-compromised host. We do not know whether these nutritionally-driven changes in virulence are limited to the particular deficiencies studied thus far or can be caused by a wider variety of nutritional deficits. Additional research is needed to define the scope of these observations and to clarify their possible significance for the overall health of the public.

NO-TILL CROP PRODUCTION

Question. No-till crop production technology yields per acre increase in take-home pay. This research study indicates increased profitability and reduced soil erosion through the no-till approach. What impact did the no-till study have on the use of pesticide and fertilizer applications?

Answer. Pesticides required to control weeds during the first 3 years of no-till cost \$49/acre/year compared to \$29 for conventional tillage. This was more than offset by average tillage costs for conventional tillage being \$85/acre/year compared to \$14 for no-till in this study near Weslaco, Texas. Crop yields were essentially the same. However, organic matter contents of no-till soils generally increase compared to tilled soils. Since this soil organic matter is about 5 percent nitrogen the no-till system is "banking" a substantial amount of the applied nitrogen fertilizer in this organic form which will be available to future crops.

LOCATION CLOSURES

Question. Please provide the number and identification of ARS research locations and designated work sites.

Answer. ARS has 105 research locations including 101 domestic, 3 foreign, and 1 territory. In addition, research is conducted at 40 work sites. The locations and work sites are listed by state as follows:

ARS RESEARCH LOCATIONS (AS OF MAY 1996)

STATE	LOCATION	STATE	LOCATION	STATE	LOCATION
AL	Auburn	IN	West Lafayette	OR	Burns
AR	Booneville	KS	Manhattan		Corvallis
	Fayetteville	LA	Baton Rouge		Pendleton
	Pine Bluff		New Orleans	PA	Philadelphia
	Stuttgart	MA	Boston		University Park
AZ	Phoenix	MD	Beltsville	SC	Charleston
	Tucson		Frederick		Clemson
CA	Albany	MI	East Lansing		Florence
	Davis	MN	Morris	SD	Brookings
	Fresno		St. Paul	TX	Beaumont
	Riverside	MO	Columbia		Bushland
	Salinas	MS	Mississippi State		College Station
	San Francisco		Oxford		Houston
	Shafter		Poplarville		Kerrville
CO	Akron		Stoneville		Lubbock
	Ft. Collins	MT	Bozeman		Temple
DC	Washington, DC		Miles City		Weslaco
DE	Newark		Sidney	UT	Logan
FL	Brooksville	NC	Raleigh	WA	Prosser
	Canal Point	ND	Fargo		Pullman
	Fort		Grand Forks		Wenatchee
	Lauderdale		Mandan		Yakima
	Gainesville	NE	Clay Center	WI	Madison
	Miami		Lincoln	WV	Beckley
	Orlando	NM	Las Cruces		Kearneysville
	Winter Haven	NY	Geneva	WY	Cheyenne
GA	Athens		Ithaca		Laramie
	Byron		Orient Point		
	Dawson	OH	Columbus		<u>INTERNATIONAL</u>
	Griffin		Coshocton		Buenos Aires, Argentina
	Tifton		Wooster		Montpellier, France
HI	Hilo	OK	Durant		Panama City, Panama
IA	Ames		El Reno		
ID	Aberdeen		Lane		<u>TERRITORIES</u>
	Boise		Stillwater		Mayaguez, Puerto Rico
	Dubois		Woodward		
	Kimberly				
IL	Peoria				
	Urbana				

ARS RESEARCH WORKSITES (AS OF MAY 1996)

STATE	WORKSITE	STATE	WORKSITE	STATE	WORKSITE
AZ	Tombstone	MN	East Grand Forks	WA	Oroville
CA	Brawley	MS	Courtland	WI	Sturgeon Bay
CO	Nunn		Holly Springs		
FL	Ft. Pierce		Lorman		<u>INTERNATIONAL</u>
	Leesburg	NJ	Chatsworth		
GA	Watkinsville	NM	Mesilla Park		Brisbane, Australia
HI	Aiea	NV	Reno		
	Honolulu	OK	Chickasha		
	Kapaa	PA	Klingerstown		
	Kekaha	PR	Corozal		
IA	Council Bluffs		Isabela		
ID	Moscow	TN	Jackson		
LA	Crowley		McMinnville		
	Houma	TX	Big Spring		
MD	Glenn Dale		Brownwood		
	Princess Anne		Mission		
	Riverdale		Riesel		
ME	Orono	VI	St. Croix		
	Presque Isle				

STATUS OF LAB CLOSURES

Question. What is the status of ARS laboratories closed in FY 1995 and FY 1996?

Answer. Of the 10 ARS locations in FY 1995, all disposal actions have been completed at 5 of these sites - Oxford, NC; Delaware, OH; Fairbanks, AK; Lexington, KY, and Rotterdam the Netherlands. The land and facilities at 4 other locations have been reported to GSA for disposal - Georgetown, DE; Pasadena, CA, Suffolk, VA; and Lewisburg, TN. The main facilities at the one remaining ARS location, Savannah, GA, will be reported to GSA this fiscal year. ARS will retain a two-acre parcel of land and one small building at this site until the environmental cleanup work is completed. One ARS employee remains at the Savannah site to provide facility maintenance and security. No ARS laboratories were closed in FY 1996.

Question. Have these locations been turned over to GSA for disposal?

Answer. All disposal actions have been completed at 5 of the 10 locations closed in FY 1995. The land and facilities at 4 other locations have been reported to GSA for disposal - Georgetown, DE; Pasadena, CA, Suffolk, VA; and Lewisburg, TN. The main facilities at the one remaining ARS location, Savannah, GA, will be reported to GSA this fiscal year. ARS will retain a two-acre parcel of land and one small building at this site until the environmental cleanup work is completed.

CLOSURE COSTS

Question. What costs has the agency incurred for each location, by FY, in the closure process?

Answer. Costs associated with the closure process are as follows:

Location	FY 1995 Costs	FY 1996 Costs
Rotterdam, Netherlands	\$ 117,148	--
Delaware, Ohio	125,441	\$ 2,000
Georgetown, Delaware	139,195	--
Pasadena, California	753,050	50,800
Fairbanks, Alaska	225,221	--
Lewisburg, Tennessee	8,525	--
Lexington, Kentucky	--	--
Savannah, Georgia	1,864,155	194,000
Oxford, North Carolina	791,520	--
Suffolk, Virginia	124,718	--
Total Closure Costs	4,516,134*	246,800

* Excludes costs associated with program closures (\$111,548) and Headquarters staff travel in support of location closures (\$15,000).

Question. What is the source of funds to meet these costs?

Answer. Location closure costs were funded by Agency lapsed salary.

Question. In FY 1996, ARS was directed to convert a number of ARS laboratories to work sites. Please identify the savings resulting from each of these conversions and identify where these cost savings were achieved.

Answer. The savings associated with converting locations to work sites is as follows:

Work Site	FY 1996 Savings
Chatsworth, New Jersey	\$ 21,738
Orono, Maine	39,214
E. Grand Forks, Minnesota	53,500
Brawley, California	12,000
Brownwood, Texas	41,381
Houma, Louisiana	124,900
Total Savings	292,733

These savings were achieved through Agency initiated cross-servicing of administrative support.

The FY 1996 appropriations act transferred Federal properties and assets at Brawley, CA; Brownwood, TX; Houma, LA; and Lewisburg, TN to non-federal ownership.

Question. Have these properties been transferred?

Answer. ARS has reported the Federal property at Lewisburg, TN, to GSA for transfer to the University of Tennessee. ARS has awarded contracts at the other three locations for Environmental Site Assessments as part of the Federal property disposal process. Since ARS plans to continue research activities at these three sites, lease agreements will be required with the non-Federal property owners. These lease agreements will stipulate the terms and conditions under which ARS will continue to use the land and facilities as worksites of other ARS locations. Upon completion of these negotiations and the resolution of all environmental issues, the Federal property at these sites will be reported to GSA for transfer to non-federal ownership.

Question. What savings are included in the ARS Budget for FY 1997 as a result?

Answer. Savings in the amount of \$292,733 achieved from administrative cross-servicing have been incorporated into the ARS FY 1997 budget. No additional savings have been included in the FY 1997 budget from the transfer of Federal properties to non-Federal ownership since these transfers are not yet complete.

Question. Where are they found?

Answer. The savings have been used to cover FY 1996 across the board general reductions and to support other high priority programs.

CONTRACTS

Question. Please provide the committee with a list of major contract services received by ARS, by location and amount.

Answer. The list of major contracts services received by ARS, by location and amount is as follows:

AREA	LOCATION	DESCRIPTION	CONTRACT NUMBER	OBLIGATED TO DATE	EST. TOTAL VALUE
BELTSVILLE					
	BELTSVILLE, MD	JANITORIAL SERVICES BARC	53-3K06-1-27	5,335,169	5,970,000
	WASHINGTON, DC	SECURITY GUARD SERVICES	53-3K06-3-12	1,689,218	1,800,000
	BELTSVILLE, MD	MAILROOM/DUPLICATION	53-3K06-1-17	2,304,605	2,800,000
	BELTSVILLE, MD	PICKUP/DISPOSAL WASTE CHEMS	53-3K06-3-16	1,029,360	1,300,000
AREA TOTALS:				10,358,352	11,870,000
HEADQUARTERS					
	BELTSVILLE, MD	GLOBAL DATA CHANGE ASSESSMENT	53-3K06-3-23	2,430,000	4,050,000
	BELTSVILLE, MD	FOOD INTAKE SURVEY	53-3K06-5-8	13,506,128	20,000,000
	GREENBELT, MD	OCCUPATIONAL HEALTH SERVICES	53-3K06-2-19	1,073,872	1,073,872
	BELTSVILLE, MD	LIBRARY SUPPORT SERVICES	53-3K06-3-10	3,202,749	3,202,749
	BELTSVILLE, MD	LEASE TO PURCHASE HP SYSTEM	54-3K06-2-12	1,048,463	1,167,144
AREA TOTAL:				21,261,212	29,493,765
MIDSOUTH					
	NEW ORLEANS, LA	O&M SERVICES	53-3K06-2-18	7,886,948	9,000,000
AREA TOTAL:				7,886,948	9,000,000
MIDWEST					
	PEORIA, IL	O&M SERVICES	53-3K06-1-26	9,725,483	9,725,483
AREA TOTAL:				9,725,483	9,725,483
NORTH ATLANTIC					
	BOSTON, MA	FOLLOW-ON CONTRACT FOR TUFTS	53-1950-5-3	21,670,341	58,976,320
	ORIENT POINT, NY	O&M SUPPORT	53-3K06-1-23	28,916,717	2,891,671
	ORIENT POINT, NY	BOILER RENTAL	54-3K06-4-16	1,283,982	1,300,000
	PHILADELPHIA, PA	O&M FACILITIES	53-3K06-4-8	7,331,680	13,000,000
	WYNDMOOR, PA	DESIGN CHEMICAL WING		1,135,348	1,135,340
AREA TOTAL:				62,338,068	77,303,331
PACIFIC WEST					
	SAN FRANCISCO, CA	FACILITIES CONTRACT	53-3K06-1-16	9,604,242	9,100,000
	ALBANY, CA	O&M ALBANY FACILITY	53-3K06-4-24	5,891,991	9,237,096
	PAPLIER, CA	DESIGN SAN JOAQUIN VALLEY		1,289,000	1,209,000
AREA TOTAL:				16,785,233	18,546,096
SOUTH ATLANTIC					
	ATHENS, GA	O&M SUPPORT	53-3K06-3-21	6,446,164	7,850,000
	FT. PIERCE, FL	DESIGN LAB/OFFICE FACILITY		2,621,605	2,621,605
AREA TOTAL:				9,069,769	10,471,605
REPORT TOTAL:				137,425,060	166,412,280

Question. What are the total obligations for contracted services in FYs 1994 and 1995 and what is estimated in FY 1996? Please specify amounts in support of research and those in support of management.

Answer. The total obligations for contracted services in FY 1994 was \$58,230,411. Of this total, \$57,689,211 was obligated in support of research and \$541,200 obligated in support of management.

The total obligations for contracted services in FY 1995 was \$61,560,004. Of this total, \$60,064,413 was obligated in support of research and \$1,495,591 obligated in support of management.

The total estimated obligations for contracted services in FY 1996 is \$59,141,495. Of this total, \$58,165,041 is estimated for support of research and \$976,454 is estimated for support of management.

A-76

Question. Is ARS engaged in A-76 contractual agreements?

Answer. Yes. ARS has converted facilities operations and maintenance support services at certain research centers to contracts as a result of the OMB Circular A-76 process.

Question. Please indicate where these are in place, the funding, and when they were implemented.

Answer. This information is detailed as follows:

<u>Location</u>	<u>FY-95 Funding</u>	<u>When Implemented</u>
Philadelphia, PA	\$2,286,857	May 1982
New Orleans, LA	1,557,458	July 1982
Peoria, IL	2,493,569	September 1982
Athens, GA	1,570,705	July 1983
Beltsville, MD	500,000	April 1985
Albany, CA	1,834,358	June 1988
Orient Pt., NY	5,398,955	February 1991

Question. Are these efficient mechanisms to augment your programs?

Answer. Yes. These contracts have effectively supported our research mission and contain the flexibility to allow for the timely and efficient response to changes in the research facilities that these contracts support. As a result of the conversion to contract, Federal FTE's were saved and cost efficiencies realized which have supported our research programs.

FTE'S UNDER CONTRACT

Question. How many full-time equivalents are represented through contractual services in ARS? Is it more efficient to operate through these arrangements as opposed to in-house?

Answer. It is more efficient to operate these services through contracts because they provide our agency more flexibility to deliver the services needed at our research centers. Contractors are able to more easily cross-train and cross utilize the workers providing these services and to adjust their staffing to meet the ever changing environment of the facilities' research mission and funding levels. The FTE's that are represented through our major support service contracts are detailed in the breakdown shown below.

Location	Facility Support FTE	Scientist Support FTE	Research Support FTE
San Francisco, CA	22	--	--
Philadelphia, PA	38	--	--
Orient Point, NY (Plum Island)	87	--	--
Boston, MA	15	39	171
Athens, GA	34	--	--
New Orleans, LA	40.2	--	--
Albany, CA	28	--	--
Peoria, IL	<u>43.6</u>	--	--
TOTAL	307.8	39	171

All contracts for each location provides facilities support services only with the exception of Boston, Massachusetts. This contract, in addition to facilities support, provides two types of research support--the scientists who conduct research and research support to the scientists such as lab assistants.

PLUM ISLAND ANIMAL DISEASE CENTER

The Plum Island Animal Disease Center has been operated through a service agreement.

Question. How has this been working?

Answer. This facilities operations and maintenance support service contract has, overall, been working out very well. The PIADC research mission has been provided the necessary services to support the research efforts of both ARS and APHIS at the island.

Question. Who pays for this contract, ARS or APHIS?

Answer. Both ARS and APHIS share the contract costs.

Question. What is the financial arrangement for cost-sharing on the Island?

Answer. The financial arrangement for the cost-sharing is 61% ARS and 39% APHIS.

Question. Identify the activities and costs for these services for Fiscal Years 1995 and 1996.

Answer. The activities and costs for these services are the following:

Activity	FY 1995 Cost Incurred	FY 1996 Cost Projections
Utilities Operations	\$2,521,281	\$2,751,140
Facilities	543,776	771,965
Administrative	1,163,846	659,000
Marine Operations	263,117	342,040
Management	163,581	149,798
Direct Materials/Fuels		
Subcontracts	1,476,908	1,892,434
Fee	<u>294,524</u>	<u>459,268</u>
TOTAL	6,427,033	7,025,645

MANAGEMENT STUDIES

Question. Please provide a list of research contracts for management studies undertaken by ARS. Please identify the recipients and funding for FY 1995 and actual and planned for FY 1996.

Answer. ARS has not undertaken any research contracts for management studies.

NATIONAL ARBORETUM

Question. Please describe the programs conducted at the National Arboretum.

Answer. The National Arboretum has a diversified program that include Research, Gardens, and Education functions. The Research program develops new and improved trees, shrubs and flowers to meet the needs of a rapidly expanding market for floral and nursery products and to satisfy public demand. The Gardens program is responsible for developing and maintaining public display gardens on the 440 acre site in Washington, D.C. The Education program conducts a wide ranging program of public education in plant conservation, environmental stewardship and the application of principles of integrated pest management in public and private gardens.

Question. What is the resource distribution to these programs?

Answer. The National Arboretum budget in fiscal year 1996 is \$7.331 million. Resources are distributed as follows: Research program - \$4.653 million; Garden program - \$1.991 million; Education program - \$.687 million.

Question. In FY 1996, Congress appropriated an increase of \$350,000 for horticultural research. How are these funds being implemented?

Answer. These funds are being implemented as directed by the Congress to support two new positions: Leader of the Education program that will include responsibility for the new internship program and an interpretive specialist to support the education activities.

Question. How many visitors does the Arboretum receive annually? How does this compare to a decade ago?

Answer. The National Arboretum received 500,000 visitors in fiscal year 1995. There is no information for the number of visitors received in 1985.

Question. What is the status of replacing and modernizing the water lines at the National Arboretum?

Answer. Replacement and modernization of the water lines at the National Arboretum is proceeding on schedule. Three wells have been dug and the major water distribution system has been completed. Because of the high mineral content of the water, a purification system will be installed. Before the new irrigation system is fully implemented, branch feeder lines to specific irrigation sites must be installed.

Question. What is the amount and source of funding for this project?

Answer. Funding for the water project is \$400,000 per year and is part of the National Arboretum base funding.

Question. How much money does the Arboretum commit to overall renovation and modernization annually?

Answer. The Arboretum committed \$739,000 to renovation and modernization in fiscal year 1996 and expects to commit the same amount in fiscal year 1997.

CENTERS OF EXCELLENCE

Question. Please identify the ARS Centers of Excellence, where they are located and their funding. Describe the programs at these Centers.

Answer. The Centers of Excellence and their funding are as follows:

Centers	FY 1996 Est Funding
Pine Bluff Arkansas	\$225,000
Lorman, Mississippi	167,000
Princess Anne, Maryland	248,000
McMinnville, Tennessee	496,000

The research program is as follows:

Pine Bluff	Evaluate alternative and develop new components of aquaculture production systems to improve efficiency of freshwater fish farming including cultural and processing methods to enhance quality.
Lorman	Establish a swine production system capable of producing feeder or market weight, meat-type pigs for rural communities in the midsouth.
Princess Anne	Identify and conduct research on critical control points affecting the microbiological contamination of poultry from grow-out through final consumer preparation, and to develop interventions and quantitative risk models to ensure food safety.
McMinnville	Develop new and improved ornamental trees and shrubs for the U.S. nursery industry. Develop basic genetic and physiological information related to nursery crop species. Reduce pesticide use and fertilizer run-off during nursery crop production. Develop improved nursery crop propagation methods. Evaluate existing germplasm or ornamental trees and shrubs for pest resistance, tolerance of environmental stress, and superior ornamental value.

Question. For fiscal year 1996, the Committee provided \$167,000 of the \$200,000 requested by ARS to establish a Center of Excellence at Alcorn State University. Please provide us with a status report on the establishment of that Center and the program funded.

Answer. The program being established for the Center of Excellence at Alcorn State University will lead to the establishment of a swine production system capable of producing feeder or market weight, meat-type pigs for rural communities in southern Mississippi. The specific objectives of the program are to: identify the breeds or strains of swine that are best suited for environmental conditions in Mississippi; evaluate reproductive performances and practices (including artificial insemination) to ensure suitable levels of fertility and litter size; and develop diets and feeding systems for all stages of the life cycle of the pig that maximize feed efficiency and growth rate.

TECHNOLOGY TRANSFER

Question. Please describe your activities in the area of technology transfer.

Answer. ARS has established a technology transfer office to facilitate, promote, and encourage the application and commercialization of technology resulting from ARS research programs, while fostering cooperation between end-users and ARS. These activities include: 1) ARS' Technology Transfer Program, which utilizes Cooperative Research and Development Agreements (CRADAs) with commercial partners to enhance mission research and to meet the specific needs of the agricultural community; 2) the Department's Patent and Patent Licensing Programs, which use intellectual property protection as a tool to transfer Federal inventions to public availability through licensing to commercial partners.

The office has a staff of technology transfer coordinators, patent advisors, and other specialists to manage these activities. Five technology transfer coordinators located in various sections of the country locate and negotiate agreements with the private sector on technologies developed in their respective regions. Negotiated agreements can include CRADAs, Memorandums of Understanding, Trust Fund Agreements and Confidentiality Agreements.

Seven patent advisors located in various sections of the country review invention disclosures, make recommendations on patentability and prepare and prosecute patent applications that will result in enforceable patents for users of ARS technology.

A technology transfer contract specialist reviews and processes CRADAs and other agreements in a timely manner and monitors the performance of these agreements. He also negotiates licenses of ARS inventions developed under a CRADA and available only to the CRADA cooperator. Another patent licensing specialist maintains our portfolio of ARS inventions available to the public for licensing, locates licensees and negotiates licenses, selecting companies with the greatest capability of bringing ARS patented technology to a commercial stage. She also monitors the progress of the licensee to ensure that the technology is successfully transferred.

In addition, we believe that effective and efficient technology transfer begins with the individual scientist. All of our professional staff participate in efforts to educate ARS scientists on intellectual property issues and on the mechanisms and advantages of laboratory-industry cooperative arrangements.

ARS has also embarked on a proactive marketing and outreach program to inform users of ARS technological opportunities. Our scientists and technology transfer professionals participate in various meetings and exhibit at selected trade shows to reach a broad customer base and offer personal assistance on ARS technology opportunities and programs. Other efforts include placing patented technologies as they are filed or issued on the Internet and supplying this information to more than 20 technology transfer/trade publications to speed delivery, broaden exposure of technology opportunities, and respond to oral and written inquiries in a timely fashion.

These activities have resulted in strong positive feedback from ARS customers on the efficiency and effectiveness of ARS technology transfer programs. This is best exhibited through commercial successes and continued strong ties to the ARS program. Complimentary statements made by ARS customers at meetings and in the business community have enhanced the reputation of the technology transfer program among companies previously unfamiliar with the organization.

LICENSES/PATENTS

Question. How many licenses, patents, and cooperative agreements were entered into in FY 1995?

Answer. In FY 1995, ARS filed 82 patent applications, was awarded 37 patents, and entered into 21 patent licenses, 87 new CRADAs, and 411 other cooperative agreements.

Question. How do these statistics compare to FY 1994?

Answer. Corresponding activities in FY 1994 were 73 patent applications filed, 38 patents issued, 11 licenses executed, 73 CRADAs, and 387 other cooperative agreements signed.

Question. What is your activity to date in FY 1996?

Answer. So far this fiscal year, we have filed 33 patent applications, received 14 new patents, executed 9 licenses, and entered into 30 CRADAs and 135 other cooperative agreements.

Question. How do you measure the success of your technology transfer activity?

Answer. Our technology transfer program has resulted in the creation of new businesses, new jobs, and new products on the agricultural and value-added products market. It has provided an influx of new technologies to agricultural and other industry partners, from improved crop breeding and genetic resources, to new food uses, to better animal health and production, to farm management, and many more. The program has particularly benefitted rural and small town economies because more than half of the CRADA's and patent licenses are with small companies located in rural America.

We currently measure the results and benefits of our partnerships on a case by case basis. Many new jobs have been created in new as well as established businesses for particular

technologies, however, methods are not currently available to quantify these or other economic impacts of the transfer of Federal technologies. ARS has been an active participant in inter-agency, university, and industry efforts to identify and develop quantitative methods and measurements of the economic impacts and societal benefits of Federal and other public sector technology transfer. To date, suitable measures have not been established. They are the subject of continuing scholarly analysis, in which ARS will continue to participate.

Another indicator of success of ARS among the Federal science agencies is the receipt by ARS scientists of 6 of the 30 Federal Laboratory Consortium Awards for Excellence in Technology Transfer in 1995, and 7 of the 30 awards in 1996. The receipt of this high a proportion of the awards available to all Federal R&D programs underscores the high rate of success of ARS technologies being rapidly developed into commercial products.

An additional effort on our part to measure impacts of our technology transfer program involves the intent of ARS to undertake a study of the strength of our patents in stimulating additional research in both the public and private sectors. This approach can demonstrate specific and overall areas of strength in research that solves critical problems of American agriculture.

Question. How does ARS interface with Federal and State extension activities?

Answer. Many ARS research programs involve professionals from the State Cooperative Extension Program, particularly where large scale field demonstration studies are required and effective communication with producers is needed. For example, the Areawide Integrated Pest Management project for codling moth in the Pacific Northwest involves close coordination between Federal as well as State extension personnel in the planning and execution of this work. The inclusion of extension specialists in ARS field programs enhances their knowledge of new technologies under development. This information is usually incorporated into education and outreach programs which increases the acceptance of improved production practices. Cooperative extension and education programs are critical so that farm managers can adopt improved methods which are compatible with complex agricultural production systems. Information about new ARS technologies and discoveries is widely shared through scientific meetings, publications and the TEKTRAN database on the Internet.

Question. How effective is this relationship?

Answer. Rapid adoption of new technology is considered an important reason that U.S. agriculture is able to produce the least expensive and most wholesome food and fiber products available in the world. This remarkable success has occurred because of a strong research capability together with an effective extension and education program. American agriculture has benefitted from this mutually supporting relationship which is often cited as the model for improving the technological competitiveness of other U.S. industries.

Question. Other than through cooperative ventures, how does ARS serve other private and public sources interested in ARS research results?

Answer. ARS assists industry representatives on specific research inquiries with commercial potential. A view of early stage technologies is afforded to industry and other members of the public through TEKTRAN, our listing of pre-publication research summaries. In response to specific inquiries, we provide direct mailings to interested companies on technologies available for licensing. In addition, industry is put in touch with ARS scientists who possess the expertise to address private sector inquiries. OTT targets various trade shows and conferences, such as Technology 2005, Freshworld '96 and BIO '95, informing industry, financial institutions, local government entities and consumer groups of ARS research programs. ARS also works with non-profit

organizations, such as The Bounty Project and The National FFA Organization with active participation in the annual Celebration of America's Bounty and FFA National Agricultural Career Show, respectively. At the request of King Communications Group, ARS helped organize and arrange speakers for a program at the Food and Nutrition Technology Transfer Conference sponsored by the consumer-based group. ARS also keeps Federal and State regulatory bodies apprised of new research developments as well as the investment community.

Question. What means, electronic or otherwise, does ARS utilize to transfer technology or make it available to those interested?

Answer. Through a cooperative effort among ARS, NAL, and CSREES, we recently made TEKTRAN, a compilation of pre-publication summaries of ARS research results, available on the Internet. In addition, a list of patents and patent pending ARS technologies is available on the Internet. The NAL's Technology Transfer Information Center Home Page includes these materials in addition to links to other technology transfer information sites. A new Home Page for the Office of Technology Transfer is under construction. It will house information about the ARS technology transfer program, patenting in ARS, and the role of cooperative agreements in effectively transferring technology out of the laboratories and into public use, in addition to promoting licensing opportunities.

We also subscribe to the adage that "technology transfer is a body contact sport" and therefore rely heavily on personal contacts with potential end-users of ARS technologies. Our cadre of licensing professionals and technology transfer coordinators foster a network of contacts in industry, trade associations, and commodity groups that serves to make our technologies widely available to an extensive range of interested parties.

Question. What materials are included in this program?

Answer. Technology Transfer packets are available to ARS customers which highlight the commercial benefits of partnership with ARS laboratories. Several brochures are available that describe the various technology transfer activities of ARS and how to reach technology transfer professionals. In addition, one-page summary fact sheets, written in business terms, are developed for licensable ARS patented technology. Technology response sheets, specifying technology type are also made available to ARS customers to assist in timely and targeted information on new technological opportunities. A trade-show style exhibit detailing the ARS research and technology transfer program is used at various meetings and expositions. ARS prepares a monthly publication, *Agricultural Research*, that highlights selected ARS research projects, and includes information about patents available for licensing. This publication is used as part of an overall technology transfer marketing package to reach the broadest customer base.

Question. What role does NAL serve in technology transfer, especially since it became incorporated into ARS?

Answer. The National Agricultural Library (NAL) resources - its collections, AGRICOLA, and Plant Genome databases, electronic information centers - create an "information advantage" for customers requiring agricultural research information. Reference and Information Center staff personally assist ARS scientists in locating information which guides their research projects and results and, in turn, staff disseminate ARS research information via newsletters, publications, World Wide Web Home Pages, and electronic conferences such as the Water Information Network.

NAL's Technology Transfer Information Center staff led an ARS/NAL initiative to place the 13,000 ARS TEKTRAN database on the Internet. Staff recently demonstrated the system's capabilities to Federal laboratory and company representatives at a National Federal Laboratory Consortium Meeting.

Technology Transfer Information Center staff also: (1) load the ARS Quarterly Report and patents issued on their World Wide Web Home Page; (2) support research administrative decision making by developing briefing packets pertaining to industry sectors, such as the paints and coatings industry; and (3) collaborate with the Eastern Regional Research Center to train their Technology Transfer Assistant and feature their new technology descriptions on the Information Center's Home Page.

ARS PERSONNEL

SCIENTISTS

Question. What is the average age of ARS scientists? What was it 5 years ago; 10 years ago?

Answer. The current average age of ARS scientists is 50.6. At the end of fiscal year 1991 it was 48.6. The average age of scientists at the end of fiscal year 1986 was 47.8.

Question. How many scientists are currently on board? How many were there 5 years ago; 10 years ago?

Answer. Currently ARS employs 1855 permanent career scientists. At the end of fiscal 1991, there were 2,134 scientists. There were 2,470 scientists employed at the end of fiscal year 1986.

Question. What is the scientist to laboratory capacity ratio in ARS? Has this changed over the past 10 years?

Answer. The scientist to laboratory capacity ratio in ARS is 83%. This ratio has not significantly changed over the past 10 years, with the highest ratio being 86% in Fiscal Year 1986.

Question. ARS' actual staff years have come in well below its authorized ceiling the past two years. What do you anticipate in FY 1996?

Answer. ARS anticipates being at or very near the ceiling allocation of 7,901 at the end of fiscal year 1996.

Question. Please identify the number of personnel defined as management in ARS in Washington headquarters and in the field.

Answer. Currently there are 16 management or policy making positions in ARS headquarters and none in the field.

Question. How has this changed since 1990?

Answer. In fiscal year 1990 there were 13 management positions located in headquarters. That number expanded to 16 in fiscal year 1991 with the reorganization of the National Program Staff from two program areas to five. The number of management employees is projected to decrease to 8 by fiscal year 1999, as part of the agency's streamlining initiative.

Question. Please provide a listing of the various scientific discipline ARS currently employs and how it compares to those in 1985. Explain why it differs.

Answer. The following list shows scientists employment for FY's 1986 and 1996. Changes in the series totals reflect decreasing employment, as well as changing research priorities.

<u>SERIES NAME</u>	<u>NUMBER IN FY 1986</u>	<u>NUMBER IN FY 1996</u>
AGRL ENGINEERING	151	105
AGRL MKTG SPECLST	5	1
AGRONOMY	90	59
ANIMAL SCIENCE	61	49
BIOMEDICAL ENGINEERING	2	2
BOTANY	19	13
CHEMICAL ENGINEERING	30	20
CHEMISTRY	513	296
CIVIL ENGINEERING	37	22
COMPUTER SCIENCE	1	1
DIETICIAN & NUTRITIONIST	1	17
ECOLOGY	7	10
ECONOMICS	0	2
ELECTRICAL ENGINEERING	0	1
ELECTRONICS ENGINEERING	1	2
ENTOMOLOGY	362	240
FOOD TECHNOLOGY	36	28
FORESTRY	0	1
GENERAL BIOLOGICAL SCI	18	35
GEN PHYS SCI	3	5
GENERAL ENGINEERING	7	1
GENETICS	171	171
GEOLOGY	6	3
HOME ECONOMICS	4	3
HORTICULTURE	40	34
HYDROLOGY	12	17
INDUSTRIAL ENGINEER	1	0
INDUSTRIAL HYGIENE	0	1
MATERIALS ENGINEERING	2	4
MATH STATISTICIAN	1	1
MATHEMATICS	1	0
MECHANICAL ENGINEERING	6	3
MEDICAL OFFICER	1	1
METEOROLOGY	1	3
MICROBIOLOGY	138	140
PHARMACOLOGY	6	3
PSYCHOLOGY	2	1
PHYSICS	16	4
PHYSIOLOGY	64	59
PLANT PATHOLOGY	167	129
PLANT PHYSIOLOGY	224	175
RANGE CONSERVATION	22	19
SOIL SCIENCE	159	127
TEXTILE TECHNOLOGY	5	3
VETERINARY MEDICAL SCI	64	37
ZOOLOGY	<u>13</u>	<u>7</u>
TOTAL	2,470	1,855

WORKFORCE DIVERSITY

Question. What is the makeup and diversity of the ARS workforce: How does it compare to 1985?

Answer. The first year that we have employment data is FY 1986. The chart below identifies the makeup and diversity of the ARS workforce for FY 1986 and FY 1996. The numbers are percentages of the total workforce.

RACE	Fiscal Year	Fiscal Year
	1986 %	1996 %
Asian/Pacific Islanders	3	4
Black	7	9
Hispanic	3	4
Native American	0	1
White	87	82
TOTAL	100	100

FTE'S

Question. Provide the agency level of ARS FTEs for 1985, 1990, and 1995.

Answer. ARS FTE for fiscal years 1985, 1990, and 1995 are as follows:

Fiscal Year	FTE'S
1985	8112
1990	8207
1995	7618

Question. Provide Management FTEs for these same years.

Answer. As previously indicated, ARS had 8 management or policy making positions in fiscal year 1985, 13 in fiscal year 1990 (with the addition of the Global Warming Staff). The number increased to 16 in fiscal year 1991 and has remained at that level due to the expansion of the National Program Staff from two program areas to five. The number is projected to decrease to 8 by the end of fiscal year 1999, as part of the agency's streamlining initiative.

PROJECT TERMINATIONS

ARS is recommending a number of project terminations to fund "high priority research."

Question. Why do you consider these projects, many of which impact production research, to be low-priority?

Answer. The agency does not consider any of its ongoing projects as low priority. However, because of critical research needs in the areas proposed for increases in FY 1997, some ongoing projects deemed less-critical are proposed for termination. Let me reiterate that while these have contributed to the solution of agricultural problems, they are considered less essential to continue under a constrained Federal budget.

Question. What criteria did you impose to determine the projects proposed for termination?

Answer. The rationale for terminating each project was based on the following criteria: (1) critical mass of scientific talent; (2) support for the Department's other mission area agencies; (3) relevance to National programs and priorities; (4) duplication of programs at other ARS locations; (5) problems better addressed at State and local levels.

The list of project terminations amounts to \$14 million.

Question. How do you plan to generate the balance of \$20 million as proposed in your budget?

Answer. ARS plans to generate the balance, which will be utilized to finance the high priority research initiatives proposed in the 1997 budget, through an across-the-board reduction of all research projects.

You are justifying an increase for Integrated Pest Management; yet you are recommending the termination of:

- Modeling and simulation of integrated management systems for arthropods;
- Management of disease in forage and turf ecosystems;
- Reduction of applied chemical pest controls;
- Integrated management of Rhizotonia seedling disease in alfalfa; and
- Yellow Star Thistle IPM.

Question. Please explain your rationale in these recommendations?

Answer. Each specific project in the Agency was evaluated based on the following criteria: (1) physical condition of the facilities; (2) critical mass of scientific talent; (3) support for USDA Action Agencies; (4) relevance to National programs and priorities; (5) similar programs at other ARS locations; (6) ability to address research needs of all clients; and (7) ability to address national problem(s) versus State/Local problem(s). As a result to this evaluation, a pool of projects was identified as being of lesser importance compared to other on-going and new project/problem areas judged to be of higher national priority.

Question. How many scientists and support staff are impacted by these terminations?

Answer. The proposed project terminations will impact 40 scientists and 40 support staff.

Question. What are the Agency's plan for these personnel?

Answer. All impacted employees will be placed in vacant positions that they are qualified for.

Question. Please identify the commodities and research activities impacted by the proposed project terminations as well as associated funding and scientist effort.

Answer. A number of commodities and research activities will be impacted by the proposed termination of some 47 projects amounting to \$14,353,100 and involving 40 scientists. Program increases of \$29,832,000 are also being proposed, which will result in actual increases for some commodities and ongoing research activities. However, the following commodities and research activities will still reflect decreased research efforts in FY 1997: aquaculture, citrus, rice, wheat, small grains, soybean, oilseeds, sheep and wool, and farm equipment research.

RECOMMENDED INCREASES

FOOD SAFETY RESEARCH

You are requesting an increase of \$7.5 million for food safety research.

Question. How much does ARS currently commit for pre- and post-harvest food safety research?

Answer. ARS currently commits \$8,592,100 for pre-harvest and \$9,608,600 for post-harvest food safety research related to the microbiological contamination of meat and poultry products, for a total of \$18,200,700.

Question. How are you assisting the Food Safety Inspection Service (FSIS)?

Answer. The ARS is assisting the Food Safety Inspection Service by conducting research that (1) provides screening or confirmatory methods for use in FSIS laboratories, such as the development of a 5-day isolation and confirmation method for *Yersinia enterocolitica*, and a rapid and sensitive PCR molecular biology method for identification of *E. coli* 0157:H7, (2) provides information for FSIS use in making regulatory decisions, such as (a) the modeling of bacterial growth or thermal death times to help set standards for processed meat products and (b) the comparison of the use of sponging vs. excision and one vs. three carcass sites for industry process control of cow/bull and hog carcasses and (3)

provides and/or evaluates technology which can be approved by FSIS for use in inspected establishments to lower contamination of meat and poultry, such as steam sterilization of beef carcasses.

Question. Please identify the current and proposed funding for pathogen reduction research. Where is this research carried out? What is the nature of this research?

Answer. Current funding for pathogen reduction research is \$18,200,700. Proposed funding is \$25,700,700. This research is carried out at Albany, CA; Ames, IA; Athens, GA; Beltsville, MD; Clay Center, NE; College Station, TX; Fayetteville, AR; and Wyndmoor, PA. This research determines the presence and numbers of specific pathogens in various environments both on the farm and during slaughter and processing; develops predictive models of bacterial growth rates and survival; develops specific pre-harvest and post-harvest controls for reducing pathogens during production and processing, such as competitive exclusion, vaccines, isolation rearing and new antimicrobial agents and processes; determines the attachment characteristics of various pathogens and develops more rapid methods to identify infected animals and animal products.

Question. Where will the recommended increase of \$7.5 million be implemented?

Answer. The recommended increase of \$7.5 million will be implemented at Albany, CA; Ames, IA; Athens, GA; Beltsville, MD; Clay Center, NE; College Station, TX and Wyndmoor, PA.

Question. How many scientists will be recruited for this research?

Answer. Fifteen scientists requiring about \$4 million will be recruited for this effort. The remainder of the funds will be used to supplement and accelerate existing programs.

Question. How will these funds be used?

Answer. These funds will be used to develop: genetic resistance and production systems to reduce human pathogens in food producing animals and poultry; pre-/postharvest intervention strategies; pathogen reducing slaughter processes; sensors/controls for HACCP validation; food pathogen risk assessment technologies; and rapid pathogen diagnostic and detection methods to reduce pathogens during slaughter and in further processing of meat and poultry products.

Question. Provide the Committee with actual obligations your Agency incurred in FY 1995 for research on E. coli; salmonella; listeria and campylobacter.

Answer. The actual obligations ARS incurred in FY 1995 for research on E. coli; salmonella, listeria and campylobacter are as follows:

Actual Obligation

E. coli	1,103,701
Salmonella	5,792,866
Listeria	106,118
Campylobacter	782,896

Question. How many scientists were involved in this research?

Answer. Twenty-six scientists were involved in this research.

Question. List recent critical achievements of your research.

Answer. Critical achievements of ARS research are as follows:

- Listeria monocytogenes - Determined the thermal resistance of Listeria monocytogenes in meat and egg products which served as the basis for a reevaluation of current requirements and establishment of new product criteria by the FSIS.
- Escherichia coli 0157:H7 - Developed a rapid and sensitive PCR molecular biology method which is being used by the FSIS to identify this organism in outbreak and regulatory screening samples.
- Escherichia coli 0157:H7 - demonstrated that this organism may increase in cattle during extended transport and fasting and/or erratic feeding schedules prior to slaughter.

- Salmonella - Determined the thermal resistance of salmonella in frankfurters and eggs and egg products; determined that sanitizing pig hauling trailers between loads significantly reduced the level of salmonella, which should prevent the transport of this organism from the processor back to the other producers.
- Salmonella - Demonstrated that the yeast *Saccharomyces boulardii* when administered to broilers at the end of the grow-out period reduces the usual expansion of Salmonella during transport to slaughter.
- Salmonella monocytogenes, *Escherichia coli* 0157:H7, and Salmonella - Developed user-friendly software currently in use by over 800 institutions worldwide which can be used to predict the growth rates, survival times, and thermal death rates for these microbial pathogens which are potentially present in foods, particularly meat and meat products.
- Salmonella and *E. coli* 0157:H7 - Provided the scientific information required to permit FSIS approval of a "steam vacuum" technology for the beef processing industry which can be used in lieu of manual knife trimming to remove contamination on beef carcasses.
- Campylobacter - Demonstrated that the yeast *Saccharomyces boulardii* when administered to young chicks decreases the growth of campylobacter during the grow-out period.

METHYL BROMIDE

Question. What research efforts are currently underway to resolve the proposed methyl bromide ban?

Answer. ARS currently has a comprehensive research program in place to develop alternatives to methyl bromide both as a preplant soil fumigant and a postharvest and quarantine commodity treatment. ARS is seeking alternatives to soil fumigation through several approaches: 1) new cultural practices; 2) improved host-plant resistance to pests and diseases; 3) biological control systems using beneficial microorganisms; 4) safer fumigants; and 5) combinations of the above. For postharvest treatment research is directed at 1) creation of pest-free agricultural zones; 2) physical methods such as heat or cold treatment or storage in modified atmospheres; 3) alternative fumigants; 4) methyl bromide trapping and recycling technologies; 5) biological control; and 6) combinations.

Question. How will the requested increase be used to support these efforts?

Answer. The requested increase, \$1 million, will be used as follows:

Development of New Soil Management Technologies - \$500,000. Research will be directed at devising more effective ways to apply alternative chemicals and physical treatments that reduce pest populations to non-damaging levels.

Development of Biological and Cultural Alternatives - \$500,000. Alternatives to methyl bromide soil fumigation will be sought including host-plant resistance, biological control of diseases, insects and weeds, improved cultural systems, and insect behavior modification.

Question. Please identify the locations currently carrying out research on alternatives to methyl bromide. Where will the requested increase be implemented?

Answer. The locations of current research are Davis, Fresno, Riverside, and Salinas, California; Washington, D.C.; Gainesville, Miami, and Orlando, Florida; Byron and Tifton, Georgia; Hilo, Hawaii; Beltsville, Maryland; Stoneville, Mississippi; Corvallis, Oregon; Charleston, South Carolina; Weslaco, Texas; Wenatchee, and Yakima Washington; and Kearneysville, West Virginia.

The FY 1997 increase is planned for implementation in Fresno, and Salinas, California; and Orlando, Florida.

WASTE MANAGEMENT

Question. Where in the ARS is research currently conducted in waste management?

Answer. Waste management research is conducted at the following locations:

- Auburn, AL (municipal)
- Fayetteville, AR (poultry manure)
- Tifton, GA (dairy manure)
- West Lafayette, IN (power plant wastes)
- Beltsville, MD (power plant, construction, and dairy wastes)
- Oxford, MS (feedlot manure)
- Clay Center, and Lincoln, NE (beef cattle feedlot manure)
- University Park and Kutztown, PA (ruminant manure and composts of animal and municipal wastes)
- Bushland and Temple, TX (feedlot manure)
- Beckley and Kearneysville, WV (coal combustion byproducts and fish manure)
- Madison, WI (dairy manure)

Question. What problems are you seeking to resolve?

Answer. Although organic wastes from animal, municipal, and industrial sources contain large amounts of the nutrients and soil amendments needed in agriculture, many of these wastes are not getting into our crop production systems but are concentrating at the feeding facilities, factories, and landfills to levels which are potentially hazardous to health or detrimental to the environment.

Ammonia and other volatile nitrogenous compounds are often released from poultry manures in such large amounts that they become a health hazard to the poultry and workers in the houses. Cost effective means are needed to stabilize these nitrogenous compounds as ammonium or biomass nitrogen that can be stored, delivered to the fields as needed and made available to crops.

Phosphorus (P) in organic complexes in manures is relatively soluble and easily carried in runoff waters to streams and reservoirs where it plays a primary role in eutrophication of reservoirs and lakes, which depreciates their quality. While plowing the manure into the ground helps bury the P out of reach of most runoff waters, it exposes the soil to beating action of rain drops which seal the surface, cause runoff, and erosion and subsequent movement of sediments and absorbed P with the runoff waters.

Pathogens and weed seeds in manures greatly decrease their value. Both can be killed by the moderately high temperatures generated by the composting process when the manures to be used are relatively free from mineral matter. However, most beef feedlots have earthen floors into which the manures are mixed, so that when the manures are cleaned from the lots they contain too much of these inert mineral materials to facilitate the high composting temperatures needed to kill the weed seeds and pathogens. Better management practices are needed which would prevent mixing the soil and manure in feedlots.

Organic material high in carbon and low in nitrogen (i.e. waste paper) provides energy for rapid microorganism growth in soils, but these microorganisms also compete for nitrogen available in the soil and can cause severe nitrogen deficiency of crops which also need the nitrogen. Consequently, application of highly cellulosic materials to the soil needs to be accompanied by nitrogen application in organic or mineral (fertilizer) form in amounts which will facilitate accumulation of the organic matter and nitrogen in the microbial biomass and residual organic matter, but will not leave too much nitrate in solution to be displaced to the ground water.

Municipal and industrial waste management are becoming major costs to society. Tipping fees at many landfills are approaching or exceeding \$100/ton in many parts of the country. Turning these wastes into valuable and beneficial byproducts has potential to benefit both the city dweller paying for waste removal and the farmers who wish to develop more organic matter and improve the quality of their soils.

Question. Will the requested increase expand these efforts or begin new initiatives?

Answer. Some of this funding will expand efforts where a broader spectrum of potentials for improvement have been indicated by ongoing studies. However, realization that pathogens (such as cryptosporidium which was responsible for at least eleven deaths in Milwaukee recently and is highly resistant to chlorination) can be transmitted via manure, has resulted in new initiatives proposed at two locations to determine conditions under which filtration of water through soils and heating by composting and other means can eliminate these real threats to human and animal health.

Increasing interfaces and proximity between housing developments and dairy farms have increased concerns and legal actions regarding odors and insects originating from wastes emanating from those animals. These insects can also be carriers of disease. Consequently, an initiative is proposed to provide understanding that will enable development of systems including anaerobic digesters, that will better control insects, diseases, and odors in dairy production systems.

Preliminary studies on effects of animal wastes applied to soils in Texas on infiltration and evaporation from soils indicate that they could significantly improve the efficiency of water use by crops and increase ground water recharge where needed. Consequently, expanded research is proposed to achieve these objectives.

Question. Where will the requested funds be implemented?

Answer. Work supported by the requested new funding will be initiated at Ames, Iowa; Beltsville, Maryland; Clay Center, Nebraska; and Bushland, Texas.

Question. How many scientists will be required?

Answer. An additional four to six scientists will be required.

INTEGRATED FARMING SYSTEMS

Question. Your Notes hypothesize that "greater dependence on management skills and reduced use of purchased inputs can lead to farming systems that are equally efficient, do not depend on growth in size for survival, and manage the natural resource base more effectively." You state there is substantial anecdotal evidence for this outcome. Please detail the information for which you premise this request.

Answer. Integrated farming systems offer many opportunities to producers who have the technical training, time, or experience to integrate the various aspects of their operation. The key is being able to identify those aspects of the operation that are inefficient in terms of human and natural resources, and developing management practices to increase profitability. In some cases, integrated farming systems involve a combination of livestock and crop production enterprises that effectively use one aspect of the operation to augment the other. For example, labor can sometimes be more fully utilized throughout the year by integrating the various operations. Other times a problem or weakness in one operation can be addressed with a by-product in another (i.e. nutrient deficiency and animal waste).

The high productivity and efficiency of American agriculture has largely evolved following a "one size fits all" strategy relative to nutrient and pesticide management. We now have many examples to illustrate where this has impaired surface and ground water quality, resulted in excessive erosion, and resulted in less than optimum profitability. Because of variability in soil properties within a field, the yield potential and need for

nutrients from outside sources changes across the landscape. Yet the inputs for crop production (labor, seed, fertilizer, etc.) are typically determined by the most limiting area. This results in excessive production costs over much of the field with little gain in yield. An equally profitable approach, but more environmentally sound, may be to reduce input costs on much of the field and increase inputs to selected areas if appropriate. This strategy has lead to the concept of precision farming or site-specific management.

The concept of site-specific management endorses doing the right thing, in the right place, at the right time. Doing any one of these things less than ideally results in economic or environmental risks. To integrate across the various activities throughout the year requires more management skills and/or time than is typically allocated when following the "one size fits all" approach.

Question. Part of this request calls for the integration of crop and livestock systems, \$1.6 million. You state "These systems will be selected with local farm leaders." Please explain. Will Extension, State Agencies, ERS be involved?

Answer. Experience has shown ARS that farmers wish to be presented with alternatives at the agricultural component level and that they usually wish to design their own systems. Research on agricultural systems necessarily involves the implementation of a complete, specific production system on each field. Involvement of farmers in designing the production systems to be researched is to assure that systems farmers would use are studied. This concept applies to control systems and to new systems being developed for such purposes as water quality enhancement. Farmers would be presented with alternative components for weed control and asked to select the one that they would most likely adopt. Continuing the same example, they would also be involved in "fine tuning" experimental weed control systems still under development to make them more acceptable to farmers while still accomplishing their water quality enhancement purpose. State agencies, ERS, and others will be involved to the extent that farmers normally refer to them in developing their systems, although ARS will encourage direct involvement from the farmers themselves.

Question. You further state that "to the extent possible, the systems will include a livestock component." How will you involve livestock in your proposal to integrate crop and livestock system?

Answer. Involvement of livestock will be according to local area preferences as influenced by information from ARS, Extension and others regarding the benefits that may accrue from their inclusion. Local farmers will generally influence the decisions, as explained in the answer to the preceding question. Systems involving livestock may speak to any of many questions, including substitution of manure for off-farm nutrients, waste management, etc.

Question. What level of resources are currently committed to farming systems research?

Answer. ARS currently commits \$5.6 million to Integrated Farming Management Systems research.

Question. Where and what lines of research are being conducted?

Answer. Integrated Farming Systems research in ARS is conducted at nine locations. Scientists at Morris, Minnesota; Ft. Collins, Colorado; and Tucson, Arizona, are doing research in the context of developing agricultural management decision aid tools. Scientists at Ames, Iowa; St. Paul, Minnesota; Columbia, Missouri; Lincoln, Nebraska; Columbus, Ohio; and Oxford, Mississippi, are engaged in developing integrated farming systems that are specifically oriented toward enhancing soil and water quality.

Question. Where will requested funds be implemented?

Answer. Brookings, South Dakota; Madison, Wisconsin; Temple, Texas; Fort Collins, Colorado; Beltsville, Maryland; University Park, Pennsylvania; Tifton, Georgia; Athens, Georgia; and Florence, South Carolina.

Question. When would you expect to see results from this research?

Answer. The current program is providing such results as Farmbook, a record keeping component of a decision aid system, that is already in use on some Minnesota and South Dakota farms. The results of expansion of the current program should begin to appear within 3 years. Results reflected on farms not included in the current research program may take 3 to 5 years longer.

Question. By what measures would you make your evaluations?

Answer. Certain outputs of the research will be tangibles such as computer-based decision-aid software programs. The degree of acceptance and use of these programs by farmers and consultants for purposes of designing and managing farming systems will be indicators by which to evaluate results. Less measurable, but hopefully observable, will be environmental and financial trends as a result of implementation of farming systems developed with use of these decision aids and other outputs of the research.

BIOCONTROL

Question. Please identify the work and locations that will be employed to develop technologies for producing biological agents and maintaining them in the field.

Answer. ARS firmly believes that pest management systems employing biologically-based technologies can lead to substantial reductions in the use of pesticides and large savings to agriculture while improving environmental quality. Research on the development, production and use of biological control agents for pests involves a number of factors that are being explored at 37 ARS locations in the United States and two ARS locations abroad.

Question. Where is this research being done presently?

Answer. The ARS biocontrol research program is conducted in the following domestic and foreign locations: Phoenix, AZ; Davis, Fresno, Shafter, CA; Newark, DE; Washington, D.C.; Ft. Lauderdale, Gainesville, Miami, Orlando, FL; Athens, Byron, Tifton, GA; Hilo, HI; Ames, IA; Peoria, Urbana, IL; West Lafayette, IN; Manhattan, KS; New Orleans, LA; Beltsville, Frederick, MD; Columbia, MO; Stoneville, MS; Bozeman, Sidney, MT; Fargo, ND; Ithaca, NY; Wooster, OH; Lane, Stillwater, OK; Corvallis, OR; University Park, PA; Charleston, SC; Brookings, SD; Beaumont, College Station, Temple, Weslaco, TX; Pullman, Wenatchee, Yakima, WA; Madison, WI; Kearneysville, WV; Laramie, WY; Buenos Aires, Argentina; and Montpellier, France.

Question. What are your base resources?

Answer. Currently, ARS supports \$50,814,200 of research on biological control of pests.

GERMPLASM

Question. Please explain how and where the proposed funding for plant and animal germplasm will be implemented. Please identify your existing funding and staffing by location.

Answer. Proposed funding for plant germplasm activities will address quarantine and taxonomy research, preservation needs for both clonal and seed (growouts, regeneration, documentation) repositories, and preservation and preservation research at the National Seed Storage Laboratory (NSSL). New germplasm activities at Parlier, California will be focused on seed regeneration to increase the number of seed accessions available for distribution and to get high quality seed into NSSL. The new effort on animal germplasm would be directed to acquisition of germplasm, ex-situ preservation and ex-situ preservation research. Existing funding and staffing are provided by location along with the proposed fund increases. Not included in this germplasm funding is a proposed animal genome database increase of \$300,000 at the NAL.

Plant Germplasm

Location	Fiscal Year 1996		Fiscal Year 1997
	Funds	Scientists	Proposed Fund Increases
Davis, CA	\$578,100	1.0	\$50,000
Fresno, CA	219,300	--	200,000
Riverside, CA	387,800	1.0	50,000
Ft. Collins, CO	2,485,500	4.5	500,000
Washington, DC	371,900	1.0	--
Miami, FL	477,800	1.0	--
Griffin, GA	1,518,200	4.0	--
Hilo, HI	452,000	1.0	50,000
Ames, IA	1,460,400	3.2	--
Aberdeen, ID	852,500	1.0	--
Urbana, IL	624,800	1.7	--
Beltsville, MD	3,726,400	9.1	400,000
Stoneville, MS	317,400	0.7	--
Fargo, ND	222,900	1.2	--
Geneva, NY	1,156,700	2.0	--
Corvallis, OR	775,400	2.0	50,000
Mayagüez, PR	953,500	1.8	--
College Station, TX	527,800	1.7	--
Logan, UT	146,500	1.0	--
Pullman, WA	1,132,000	4.9	200,000
Madison, WI	244,300	2.0	--
Headquarters	856,100	--	--
Total	19,487,300	45.8	1,500,000

Animal Germplasm

Location	Fiscal Year 1996		Fiscal Year 1997
	Funds	Scientists	Proposed Fund Increases/Decreases
Brooksville, FL	\$336,000	1.2	--
Athens, GA	181,800	0.1	-181,800
Dubois, ID	995,100	1.9	--
Beltsville, MD	2,715,600	5.7	600,000
Miles City, MT	936,900	2.0	--
Clay Center, NE	1,984,200	6.0	--
Headquarters	331,000	--	--
Total	7,898,800	16.9	418,200

Question. Please identify your resources committed to maintaining plant germplasm repositories. How much is committed to collection of plant germplasm and how much is committed to evaluation of your germplasm.

Answer. The estimated funding for maintaining the ARS germplasm system repositories for FY 1996 is \$19,487,300. Included in this total are: \$3,855,100 for collection activities to include acquisition, quarantine, and taxonomy; and, \$15,632,200 for preservation activities, to include germplasm maintenance, characterization, documentation, storage, and distribution.

Evaluation of germplasm is an activity conducted outside of the repositories by breeders and other users of germplasm. ARS commits \$25,855,000 to evaluation activities.

Question. What are the States' resources committed to the repositories?

Answer. State resources include both direct commitments and in-kind support to Regional Plant Introduction Stations (RPIS) and the Interregional (IR) Potato Station. The direct commitments can be identified and reported more accurately as off-the-top funding from formula funding through the Regional Directors' Associations and direct contributions from the host agricultural experiment stations. Those resources are identified:

<u>Location</u>	<u>Repository</u>	<u>Formula funds</u>	<u>Local funds</u>
Griffin, GA	Southern RPIS	\$234,800	\$350,000
Ames, IA	North Central RPIS	479,000	317,000
Geneva, NY	Northeastern RPIS	142,000	--
Pullman, WA	Western RPIS	352,000	186,000
Sturgeon Bay, WI	IR Potato Station	153,500	119,200
Total		1,371,300	972,200

INTEGRATED PEST MANAGEMENT (IPM)

Question. ARS is requesting an increase of \$4,932,000 for IPM research. What is currently undertaken by ARS?

Answer. In support of the Department's IPM Initiative, ARS currently conducts pest control research which includes projects to develop environmentally-friendly pest control technologies that emphasize classical and augmentation biological control, host-plant resistance, behavior modifying chemicals (e.g. pheromone mating disruptors and attracticides), sterile insect release techniques, autocidal control technologies, resistance management, cultural practices, and other related pest control tactics. ARS scientists are not only working to develop these component IPM technologies but are also involved with State, regional and local IPM teams in a variety of action-oriented implementation programs that demonstrate biologically-based pest control in on-farm situations. In addition, ARS has taken the lead in demonstrating the use of area wide IPM tactics. The budget proposes an increase in these area-wide projects of \$2,182,000.

Question. By location, provide funding and scientist effort.

Answer. The information on the location and funding for consolidated IPM projects currently undertaken by ARS is provided for the record.

Location	FY 1996 Funds	FY 1996 Scientists
Albany, CA	93,900	--
Fresno, CA	1,100,700	3.4
Salinas, CA	248,200	1.0
Shafter, CA	233,200	0.8
Canal Point, FL	59,300	0.4
Ft. Lauderdale, FL	664,200	2.0
Gainesville, FL	1,369,800	6.4
Miami, FL	464,700	2.3
Byron, GA	125,200	0.5
Tifton, GA	575,800	1.7
Ames, IA	56,800	0.2
Manhattan, KS	120,000	0.8
New Orleans, LA	144,000	0.8
Beltsville, MD	1,029,400	3.7
Stoneville, MS	1,704,100	6.0
Columbia, MO	91,000	0.4
Lincoln, NE	255,000	1.7
Ithaca, NY	319,000	1.3
Raleigh, NC	48,800	0.2
Stillwater, OK	200,100	0.8
Charleston, SC	337,200	0.8
Brookings, SD	687,200	3.3
College Station, TX	984,900	3.7
Kerrville, TX	421,600	1.5
Weslaco, TX	794,900	1.8
Pullman, WA	215,200	1.1
Yakima, WA	2,403,500	4.2
Headquarters	<u>9,700</u>	--
TOTAL	<u>14,757,400</u> 1/	<u>50.8</u>

1/ Total includes area-wide research of \$3,772,000 at various locations.

Question. Does your current research for biocontrol, pesticide application research, and minor use pesticides fall into your base effort for IPM?

Answer. The ARS budget for the IPM activities listed previously (\$14,757,400) does not include base research on biological control, pesticide application research and minor use pesticides. The overall ARS budget for consolidated IPM programs (area wide and farm level programs) including the related programs of biological control, pesticide application research and minor use pesticides, totals \$68,882,000. Expenditures on the combined activities of IPM and all other pest control research (component research) totals \$132,837,000.

Question. Please provide a breakdown of your chemical and non-chemical research components that fall within the general area of IPM.

Answer. Of the overall figure of \$132,837,000, \$105,908,000 (80%) is devoted to non-chemical research while \$26,929,000 (20%) is associated with research on chemical pest control technology.

Your justification states that by the year 2000, ARS will have evaluated three area wide pest management systems and that this supports the Department's commitment to implement biologically-based IPM practices on 75 percent of the Nation's croplands. If your research on three pest management pilot studies is being validated by the year 2000, it's unclear how the Administration will be in a position to implement a nationwide IPM program on 75 percent of the Nation's croplands acreage in the year 2000.

Question. Please explain how this will be done and who will be convincing the Nation's farmers of its doability.

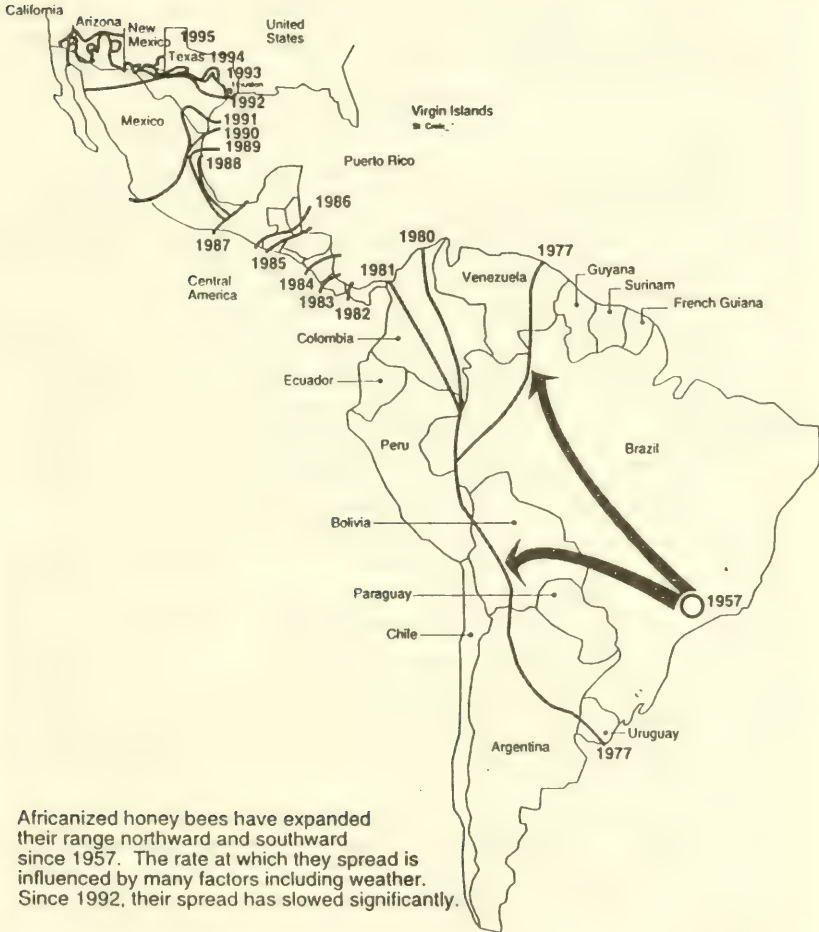
Answer. To meet the Department's goal of implementing IPM practices on 75 percent of all crops by the year 2000, USDA has developed a plan that integrates the activities of State IPM teams, Federal Agencies including the CSREES, ERS and the NASS and local groups, including producers and agribusiness. ARS is in partnership with these groups in developing an accelerated research and technology transfer program that will encourage adoption of replacement technology for chemical pesticides. The combined efforts of all USDA activities (including ARS' IPM component research, field/farm level technologies, and area wide demonstration projects) and associated activities of state and local cooperators will be required to convince the Nation's farmers of the practicality of using IPM in many cropping situations.

BEE RESEARCH

Question. Please provide a map indicating the history of the Africanized migration from South America. Where are its current boundaries?

Answer. A map reflecting the history of the Africanized migration from South America and its current boundaries is provided.

Migration of Africanized Honey Bees



Question. Where do you believe the Africanized bee migration will ultimately extend?

Answer. There have been several projections on how far the Africanized bee (AHB) migration will ultimately extend. The actual migration will depend on the impact of parasitic mites, climate, availability of food throughout the year, and competition for food from the commercial European honey bees (EHB).

We predict that along the Pacific coast, the Africanized bee will extend its range as far north as San Francisco, on a seasonal basis if not permanently. Similarly, along the East coast it may extend its range to Norfolk, Virginia, on a seasonal basis if not permanently. In the South, we believe that ultimately the Africanized bee will migrate to and establish in the southern States--Florida, Georgia, Alabama, Mississippi, Arkansas--along the Gulf Coast.

However, as the Africanized bees extend their range northward, they will, through matings with the commercial European bees over many generations, lose their distinctive genetic and behavioral characteristics. This is expected to happen because by mating with local bees in successive generations, the genetic material of AHB will be diluted out to the point that it would be difficult to distinguish the hybrid from the European bees.

Question. What effect are the Africanized bees having on U.S. honey production and pollination?

Answer. The effect of the Africanized bees on the U.S. honey production has been limited because its migration has not extended to the major honey producing areas of California, and the AHB has not been found in the major honey producing States of North Dakota, South Dakota, and Florida. Beekeepers move their colonies from the Dakotas to Florida and Texas during the winter months.

The major effect of the Africanized bee on pollination has been limited to the Rio Grande Valley area. However, so far, the beekeepers have been able to limit the negative impact. As more and more Africanized queens enter the commercial colonies, the beekeepers have started to requeen their colonies with the European bee. Of course, this has added to the cost of managing and renting bees for pollination.

Question. What other social or economic problems are resulting from the northward migration and what issues are involved?

Answer. The northward migration of the Africanized bee has caused several social and economic problems. The social problems include increase in stinging incidences in public lands and public parks as these bees establish themselves in holes and crevices of empty residential and farm buildings and structures. There have been three human deaths--one in Texas; and in 1995, two in Arizona attributed to Africanized bees in the almost 6 years the bees have been in the U.S..

The economic problem results from the higher cost of maintaining bees to the beekeepers which reflects in higher costs for bee pollination rentals to the growers. For example, in the Lower Rio Grande Valley, beekeepers spend 25 percent more above their normal operating costs to maintain commercial bees for pollination. This is due to increase in the labor cost for requeening colonies and in the cost of purchasing queens. AHB queens continue to enter domestic hives in increasing numbers. This is jeopardizing commercial beekeeping, pollination, and the production of mite resistant stocks. AHB queens have a shorter development time than EHB such that, at the time of queen replacement, AHB queens emerge first and mate with drones before the queens of European honey bees emerge. This "locks" AHB traits into the subsequent colony populations. There have been reports of beekeepers quitting the business for fear of liabilities resulting from the stinging from the perceived Africanized bees in their rental bee colonies.

The increased cost to growers results from the need for safety equipment and clothing for the personal protection of workers from stinging incidents in the vegetable and fruit fields.

Question. What are the economic consequences of Varroa and Acarine mites on beekeeping?

Answer. There are significant economic losses to beekeepers due to infestations by Varroa and Acarine mites. Surveys indicate Varroa and Acarine mites have practically decimated feral bees 65-70 percent, and are responsible for declining domestic honey bee colonies. According to a recent report, approximately 70 percent of the domestic colonies in Michigan were lost to mites during 1995. Most beekeepers lose bee colonies to mites during the winter. Consequently, beekeepers must replace these colonies in the spring. The high demand for honey bee queens drives up the cost of starting new colonies to makeup for the winter loss of colonies. This, in turn, increases the cost of rental bees to the farmers and vegetable and fruit growers.

Questions. What research is being done on these pests? At what locations?

Answer. New and improved methods of mite control are being developed at four ARS locations. Scientists at the Honey Bee Research Units at Weslaco, Texas, and Tucson, Arizona, are developing new and improved methods for chemical control of mites; the Bee Research Laboratory at Beltsville, Maryland, is focused on finding natural products including such things as clove oil, eucalyptus, and thymol for mite control; whereas, scientists at the Honey Bee Breeding, Genetics, and Physiology Research Unit at Baton Rouge, Louisiana, are working on selection and propagation of mite resistant stocks of honey bees.

Question. How much is the agency spending on honey bee research by location for FYs 1996 and 1997?

Answer. In fiscal year 1996, funding for honey bee research will be \$4,385,000. This excludes funds for "other pollinating insects" in the amount of \$1,188,600. The ARS total bee research budget in fiscal year 1996 amounts to \$5,573,600. Honey bee research by location is provided in the following table.

Location	FY 1996 Funds	FY 1997 Funds
Tucson, AZ	\$1,080,700	\$1,080,700
Baton Rouge, LA	1,127,000	1,127,000
Beltsville, MD	1,335,700	1,335,700
Weslaco, TX	<u>841,600</u>	<u>841,600</u>
Total	4,385,000	4,385,000

Question. Please breakdown your spending by honey bee research; Africanized bee research, Varroa mite research, and Acarine mite research. How many scientists are involved in these areas of research?

Answer. A breakdown in spending by honey bee research, Africanized bee research, Varroa mite research, and Acarine mite research is provided in the following table.

Area of Research	FY 1996 Funds	FY 1996 Scientists
Honey bee research	\$4,385,000	20 1/
Africanized bee research	1,802,000	8
Varroa mite research	426,400	2
Acarine mite research (bee-related only)	990,700	5 2/

1/ This excludes "other pollinating research" of \$1,188,600 and 4 scientists.

2/ This excludes Acarine mite research related to livestock of \$167,100 and 2 scientists.

Question. By location, how many scientists working on bee related research are on board and how many positions are unfilled?

Answer. The following table provides, by locations, the number of scientists on board working on bee related research and the number of unfilled positions.

<u>Location</u>	<u>No. of Scientists</u>	<u>No. of Unfilled Positions</u>
Tucson, AZ	6	0
Baton Rouge, LA	5	0
Beltsville, MD	7	0
Weslaco, TX	3	1
Logan, UT	3	1

MAD COW DISEASE RESEARCH

Question. Please describe the current situation of BSE in Europe and the U.S.

Answer. Bovine spongiform encephalopathy (BSE) is a chronic degenerative disease affecting the central nervous system of cattle believed to be caused by an aberrant protein called "prion." It was first recognized in 1986 in Great Britain. The disease has also been confirmed in domestic cattle in France, Portugal, and Switzerland and in cattle exported from U.K. to Oman, the Falkland Islands, Germany, Denmark, Canada, and Italy. BSE has never been recognized in the U.S. despite a vigilant surveillance program instigated by the Food Safety and Inspection Service and the Animal and Plant Health Inspection Service (APHIS). The recent announcement by the British Government suggesting there may be ties between Creutzfeld-Jakob disease (CJD) in human beings and BSE in cattle has devastated the British cattle industry. This new variant of CJD has not been scientifically proven to be caused by BSE. This communication by the British Government and subsequent British and European press reports have resulted in the European Union placing a complete export ban on British meat and livestock derived products. Furthermore, the European Union has agreed that the U.K. should depopulate up to one third of their national herd. Other European countries are increasing their level of surveillance as is also the case in the U.S.

Question. What kinds of research does ARS do in this regard?

Answer. Diagnostic surveillance has not detected BSE in the U.S. However, present in the U.S. are related transmissible spongiform encephalopathies (TSE's) which have been recognized in sheep and goats (scrapies), mink (transmissible mink encephalopathy - TME) and chronic wasting disease of mule deer and elk. ARS has studies in progress to: develop diagnostic tests to improve detection at post-mortem of scrapie and BSE using these results as a basis to develop tests for live animals; compare the clinical syndromes and tissue changes of scrapie and TME infection in cattle with BSE; attempt to reproduce BSE symptoms in cattle by feeding untreated scrapie-infected sheep brain and rendered scrapie-infected sheep protein supplements; determine the possible occurrence of BSE in downer cattle; and understand the basis of genetic susceptibility to scrapies in some breeds of sheep.

Question. With whom do you coordinate your research?

Answer. For the past 7 years, ARS has coordinated a Scrapie/Bovine Spongiform Encephalopathy Consultants Group which has met every other year since 1989. This Consultants Group is made up of 13 individuals from ARS, APHIS, National Institutes of Health, university researchers, and key stakeholders from the livestock industry. In addition to this "working group," a number of additional scientists and stakeholders were invited to participate in each meeting to gain a perspective of ongoing research from both the veterinary and human prion diseases. These meetings and the guidance of the Consultants Group has been instrumental in setting the ARS research priorities on prion diseases. Both ARS and APHIS have sent representatives to U.K. beginning about 10 years ago to make contact with U.K. BSE researchers. This has resulted in continuing U.S. scientific participation on key U.K. committees dealing with BSE. Recently, we have expanded the net wider to include more communication with

Japan, Australia, New Zealand, and Canada. Because of suggestions that BSE and CJD may be related diseases, ARS will be fostering closer ties with medical researchers working on CJD and prion disease diagnostics. The Scrapie/Bovine Spongiform Encephalopathy Consultants Group is scheduled to meet this year on June 10-11 at Ames, Iowa. This meeting will be an update on veterinary and medical research in the area of prion disease. ARS is taking the lead in organizing this meeting on its regular biannual basis.

Question. What is the short and long term impact of this disease for Europe and the U.S.?

Answer. For those countries in Europe where BSE has been detected in native cattle such as U.K., Ireland, France, Portugal, and Switzerland, consumption of beef has dramatically decreased and export restrictions to other countries are being implemented by the EU. The economic and environmental impact of these export bans and depopulation measures required are having a devastating impact on the British livestock and allied industries. The long-term impact of this incidence for the U.K. is unknown, but there will undoubtedly be profound long-term economic impacts. If the associations between BSE and CJD are confirmed, there will be untold effects on human health. The WHO has called for a ruminant to ruminant feed ban. If this recommendation is followed worldwide, the cycle of feed induced BSE infection in cattle should be broken and the incidence will continue to fall in U.K. herds. Such a feed ban has economic implications for industries that render livestock and for feed producers.

If this disease is detected in the U.S., we can expect similar effects as have been seen in the U.K.; i.e., export bans on all our livestock products and loss of confidence in beef consumption in the U.S. If we continue to feed ruminant protein to our livestock, there may also be international trade bans placed on our livestock products simply because we have no diagnostic method to detect scrapies and BSE in living animals. Other countries may not wish to take the risk of importing products that have been potentially tainted with prions.

Question. What is your research indicating?

Answer. The presumptive method in which U.K. cattle contracted BSE was through feed containing rendered protein from scrapies infected sheep. In order to test this hypothesis, ARS conducted a long-term experiment in which a group of calves were injected intracerebrally with raw brain from scrapies infected sheep; a second group of calves were fed raw brains from scrapies-infected sheep; and a third group of calves were feed rendered sheep protein from a scrapies infected sheep. The calves injected with scrapies later developed a neurological disease and were killed. The disease pattern was different from classical BSE but did test positive for prion. The other two groups of cattle have been followed for over 5 years and have not developed clinical signs of disease. After a total of 8 years, the cattle will be culled and their brains will be examined for evidence of BSE-like lesions. Results of ARS research to date suggest that oral feeding of scrapie infected tissue does not cause disease in cattle. An improved method to demonstrate abnormal prion distribution in the brains of cattle has been developed for use on post-mortem samples. Because this disease does not cause a normal immune response, it has been impossible, to date, to develop a diagnostic test to be used in live animals. Such a test is desperately needed and will require additional resources for the ARS program. A number of supposed diagnostic tests have been described in the popular press, none of which have been published as of yet in a peer reviewed scientific journal. ARS is well-placed to coordinate prion research in livestock because we can infect animals in our high containment facilities and collect tissue and blood samples to be used to validate scrapies/BSE diagnostic tests.

Question. By location, provide funding and staffing for BSE research.

Answer. The funding and staffing for BSE research is as follows:

<u>Location</u>	<u>Funds</u>	<u>Scientists</u>
Ames, Iowa	\$847,000	1.7
Pullman, Washington	<u>793,700</u>	<u>2.6</u>
Total	1,640,700	4.3

KARNAL BUNT RESEARCH

Question. Please describe the current problems the U.S. has with this disease and its implications.

Answer. Karnal bunt disease of wheat was identified in the U.S. for the first time on March 8, 1966, in Arizona. The USDA has put into place plans to contain and eradicate the disease. The actual crop loss to the disease is not expected to be severe, but the disease has quarantine significance and has eliminated wheat movement from the quarantined area, which includes all of Arizona and parts of two counties in California. Wheat movement from areas of the United States not known to have Karnal bunt is generally unaffected after new agreements with trading partners were negotiated. The Animal and Plant Health Inspection Service will take the lead in conducting a nationwide survey as wheat is harvested to determine the extent of the disease and to provide additional assurance of disease-free areas. Should the disease become more widespread, additional areas would be impacted by quarantine actions.

Question. What research is ARS doing and what resources are you committing?

Answer. Beginning in 1982, ARS has conducted research on the detection, identification, and biology of the Karnal bunt fungus. In addition, cooperative research on the disease and its control has been conducted with scientists in India and Mexico, countries where the disease is endemic. Since the recent discovery, ARS has committed additional personnel and resources to support the APHIS effort to contain and eradicate the disease. Current research objectives include development of improved fungal detection and identification technology, evaluation of methods to destroy fungal spores, and identification of factors and conditions affecting disease spread. Base resources committed in FY 1996 are \$68,900 plus an additional \$200,000 from the Contingency Fund will be released for research at Frederick, Maryland.

RANGE RESEARCH

Question. What are the objectives of your range research program?

Answer. The primary objective of ARS rangeland research program is the development of better practices for the management of range vegetation and livestock practices which not only sustain profitable production of meat and fiber but also protect the soil, vegetation and maintain the ability of rangelands to function as watersheds and provide wildlife habitat. For example, research at certain locations focuses on how to manage the range during periods of drought. Another objective of the rangeland research program is to develop a better understanding of the ecological processes which characterize these complex environments, such as nutrient cycling, the hydrological cycle, and the effects of grazing on the many kinds of plants which grow on rangelands. This work supports the development of computer models and decision-support tools which allow managers of both public and privately-owned rangelands to select the best options from among the alternatives available to them. The ecosystem research also provides the fundamental knowledge upon which improvements can be made in natural resource and environmental protection. ARS research focuses on the development of more productive and drought-tolerant forage grasses, provides information concerning the biology and control of

introduced weeds, and provides better ways to avoid livestock losses due to poisonous weeds. ARS laboratories in the eastern U.S. and in foreign countries support the research directed at range weed control and poisonous plants by evaluating potential biological control agents and characterizing the chemistry of plant toxins.

Question. Which locations carry out these objectives? What funds were obligated in 1995? How much is currently planned? What is your funding estimate for 1997?

Answer. The locations and funds allocated for fiscal years 1995 - 1997 to carry out these objectives are as follows:

Location	FY 1995 Funds	FY 1996 Funds	FY 1997 Funds
Booneville, AR	\$ 205,422	\$ 255,900	\$ 255,900
Tucson, AZ	327,855	279,200	279,200
Albany, CA	200,859	177,100	130,100
Fresno, CA	561,460	541,600	541,600
Ft. Collins, CO	385,761	392,300	392,300
Boise, ID	576,636	500,800	500,800
Dubois, ID	322,216	312,500	312,500
Columbia, MO	7,369	30,300	30,300
Beltsville, MD	184,908	107,500	107,500
Frederick, MD	126,989	125,400	125,400
Bozeman, MT	1,699,495	1,504,100	1,504,100
Miles City, MT	476,803	471,200	471,200
Sidney, MT	157,390	153,000	153,000
Lincoln, NE	197,105	211,000	103,000
Mandan, ND	561,938	560,900	560,900
Las Cruces, NM	702,998	1,057,000	1,057,000
El Reno, OK	184,619	189,300	189,300
Burns, OR	378,206	354,300	354,300
Woodward, OK	1,116,043	1,052,300	1,052,300
Temple, TX	1,662,858	1,356,100	1,356,100
Weslaco, TX	335,196	340,800	340,800
Logan, UT	1,607,365	1,594,600	1,534,700
Cheyenne, WY	762,493	691,900	691,900
Buenos Aires, Argentina	282,666	204,600	204,600
Montpellier, France	525,250	501,100	501,100
TOTAL	13,549,900	12,964,800	12,749,900

Question. Please explain how your range research objectives relate to those of the Forest Service, Bureau of Land Management and Interior?

Answer. ARS range research objectives directly support the research needs and objectives of the Forest Service, Bureau of Land Management, and Bureau of Reclamation of the Department of the Interior, in that the technology and knowledge produced by the ARS range research programs are often directly applicable to their specific problems. Much of the ARS range research is conducted in western States where most rangeland is managed by the Forest Service and Bureau of Land Management. Such research is often conducted cooperatively by ARS and other Federal agencies. Rangeland research conducted by the Forest Service, is primarily directed at maintenance and restoration of native plants and animals and their habitats, biodiversity, shrub ecology, and monitoring of the ecological status of rangelands. Forest Service research does not address the agricultural use of rangelands for food and fiber production, with the exception of a program concerned with overlap of habitat requirements for livestock and wildlife. The Bureau of Land Management and the Bureau of Reclamation have little in-house research capability, and they are considered to be important customers by ARS range researchers. Similarly, the ARS range research program supports the needs of the Natural Resources Conservation Service for science and technology related to improved management and conservation of privately-owned rangelands.

AQUACULTURE RESEARCH

Question. Please list those locations involved in aquaculture research, their specific programs and current funding and staffing.

Answer. The funding and scientists for aquaculture by location are as follows:

Location	FY 1996	
	Funds	Scientists
Auburn, AL	\$850,400	3.0
Pine Bluff, AR	224,800	1.0
Hilo, HI		
Oceanic Inst.	1,628,900	--
New Orleans, LA	803,900	2.5
Beltsville, MD	143,700	--
Stoneville, MS		
Warm Water		
Aquaculture	1,463,200	--
Other-In House	<u>514,100</u>	<u>2.5</u>
Total MS	1,977,300	2.5
Kearneysville, WV	1,462,000	--
Headquarters		
College Sta., TX	369,000	--
Stuttgart, AR	<u>1,027,500</u>	<u>--</u>
Total Headquarters	1,466,500	--
 TOTAL	 8,557,500	 9.0

Question. What accomplishments are being generated from aquaculture research?

Answer. ARS scientists conducting disease research at Auburn, AL, have a Cooperative Research and Development Agreement with Diagnostics, Inc., who is initiating field testing on a 30-minute ARS developed test to detect enteric septicaemia (ESC) infected fish. Upon commercialization, the test kit will be sold to fish farmers to make an early accurate diagnosis of ESC in order to treat the disease effectively. Research demonstrated that antibodies harvested from surviving ESC infected immune catfish failed to passively immunize catfish against ESC. Dietary studies with sulfate and methionine forms of zinc showed that low levels of zinc methionine enhanced non-specific immune response, but neither form of zinc stimulated protection against ESC.

ARS scientists at New Orleans, LA, using site-specific computer models based on data from airborne optical sensors validated and used them to evaluate growth and physiological status of microorganisms that produce "off-flavor" compounds in ponds. Several copper-containing aquatic herbicides that are applied to catfish ponds to reduce the growth of algae that cause "off-flavors" were found to induce both growth and "off-flavor" compounds biosynthesis in bacteria and fungi. Scientists at Stoneville, MS, working with growth of *oscillatoria chalybea*, the blue-green algae responsible for most "off-flavor" in pond-raised catfish was inhibited 80 percent by low levels of diuron, a herbicide. Scientists at Stuttgart, AR, exposed channel catfish to copper in the form of waterborne copper sulfate for 12 weeks, and the results indicated accumulation of copper in liver tissue, but not in edible muscle. ARS scientists at Stoneville, MS, have shown progress through selective mating in lines of catfish selected for growth rate and ESC resistance. DNA based technology was developed for identification of strains, families and individual catfish. The technology is needed to maintain and assure strain integrity in commercialization and sale of future stocks, since strains of catfish are difficult to visually distinguish.

An ARS food technologist at Pine Bluff, AR, is continuing to improve canned big head carp, a potential aquaculture product with cooking treatments and evaluation with consumer taste panels. Scientists at Kearneysville, WV, conducted a field trial with the ultrasonic waste feed controller (UWFC) that showed satiation feeding with the UWFC or by hand produced the same feed conversion and 40 percent faster growth than ration feeding of trout. Adding ozone to the water within a recirculating culture system improved microscreen filtration, water quality, and reduced bacterial gill disease.

FRUIT FLY RESEARCH

Question. Please detail the fruit fly research program.

Answer. The ARS fruit fly research program encompasses a diversity of approaches that address the issues of detection, control, and eradication of pest species. Major emphasis is placed on the following seven fruit fly species: Mediterranean, Oriental, Caribbean, Mexican, Melon, Malaysian and Papaya. Innovative research programs include the development of new sensitive traps for detecting fruit flies, development of an environmentally acceptable toxicant as a replacement for malathion in bait sprays, biological control with fruit fly specific parasites to reduce the level of pest populations, enhancement of the natural resistance of host fruit to infestations, and improvements in competitiveness of sterile flies released as part of the sterile insect technique. Taken together, these programs provide an integrated approach to the control of pest species of fruit flies, that emphasizes early detection with more effective traps, reduction in the pest populations through biological control with parasites, and improvements in bait sprays and the sterile insect technique.

Question. Where is this research carried out?

Answer. Research on fruit flies is based at the following eight ARS locations: Albany, CA; Fresno, CA; Gainesville, FL; Miami, FL; Orlando, FL; Hilo, HI; Beltsville, MD and Weslaco, TX.

Question. How much money was obligated for each of those pests in FY 1995; what is currently planned and what is your estimate in FY 1997?

Answer. The amounts for each pest species are as follows:

SPECIES	FY 1995 Obligations	FY 1996 Funds	FY 1997 Funds
Caribbean Fruit Fly	\$1,845,128	\$1,870,300	\$1,870,300
Malaysian Fruit Fly	\$ 776,932	\$ 776,300	\$ 744,600
Mediterranean Fruit Fly	\$3,163,854	\$3,255,100	\$3,096,900
Melon Fruit Fly	\$ 826,879	\$ 855,000	\$ 823,400
Mexican Fruit Fly	\$1,169,334	\$1,050,900	\$1,050,900
Oriental Fruit Fly	\$1,098,706	\$1,108,600	\$1,045,300
Papaya Fruit Fly	\$ 157,174	\$ 177,800	\$ 177,800
Other Fruit Flies	\$2,170,234	\$2,292,700	\$2,261,100

SUGAR CROPS RESEARCH

Question. Please describe your research in sugar crops.

Answer. Research on sugar crops includes breeding for improved cultivar adaptation to stress environments and increased levels of pest and disease resistance.

Question. Where is the research performed?

Answer. Listed below are the locations where research is performed:

Location	FY 1996 Funds	FY 1997 Funds
Albany, CA	\$ 23,200	\$ 23,200
Salinas, CA	1,327,800	1,327,800
Ft. Collins, CO	626,700	--
Canal Point, FL	1,049,000	1,900,800
Miami, FL	109,700	109,700
Hilo, HI	1,506,900	1,506,900
Peoria, IL	142,500	142,500
New Orleans, LA	1,735,300	1,735,300
Beltsville, MD	961,600	961,600
Frederick, MD	32,300	32,300
East Lansing, MI	666,500	666,500
Sydney, MT	56,300	56,300
Fargo, ND	1,091,300	1,091,300
Wyndmoor, PA	63,300	63,300
Mayaguez, PR	96,600	96,600
College Station, TX	221,900	221,900
Weslaco, TX	434,700	434,700
Headquarters	64,600	64,600
TOTAL	\$10,210,200	\$10,435,300

Question. What is the current and projected funding for this research?

Answer. The current funding for this research is \$10,210,200 and the projected funding in FY 1997 is \$10,435,300.

Question. Please discuss recent accomplishments in sugar crops research.

Answer. Recent accomplishments for sugarcane and sugarbeets are provided for the record.

Sugarcane - (1) The research team in Houma, Louisiana has made major advances in breeding for resistance to sugarcane rust, smut, yellow leaf syndrome and leaf scald. Four recent cultivars, were developed. These cultivars have the potential of increasing sugar yields per unit area by 10-25%. The team has released 6 varieties in the last 6 years and has registered 5 germplasm clones with superior resistance to the sugarcane borer. (2) Research in Florida is focusing on the development of sugarcane that can be grown under high water table conditions. Selections have been made that tolerate these conditions in the changing south Florida ecosystem environment. Studies are also in progress on reducing the levels of phosphorus applied to sugarcane and preliminary results show that concentrations of phosphorus applied to the crops may be reduced without affecting plant growth.

Sugarbeets - (1) Research in Fargo, North Dakota, on development of a biopesticide for control of sugarbeet root maggot has shown that selected strains of Bacillus thuringiensis can be used to infect the maggot achieving high mortality. In addition, a germplasm line has been selected that has a high level of resistance to the root maggot. (2) ARS researchers have released sugarbeet lines with resistance to Cercospora leafspot disease, Rhizoctonia root disease, and Rhizomania, three of the most serious diseases of sugarbeet.

ANIMAL SCIENCE RESEARCH

Question. Please identify research needs in the area of animal production efficiency research.

Answer. Research needs in animal production efficiency include reducing pathogens that can adversely impact human health, optimize animal waste applications to meet crop needs and enhance environmental quality; integration of crop and livestock systems, and identification of genes that control economic traits.

Question. Identify funding requirements and current resources.

Answer. Current resources for animal production research total \$41,545,000. The proposed FY 1997 budget for ARS requests additional funding of \$2,500,000 for animal health and pathogen reduction research which is related to both production efficiency and human food safety.

Question. Please identify priority research needs in the area of animal health.

Answer. ARS animal health research targets domestic and exotic diseases of livestock that affects production, or gives rise to food safety issues. In addition to these established priority disease research programs, there are a number of new emerging livestock disease issues that may affect future international trade and/or domestic production for which ARS needs to initiate research programs or strengthen ongoing programs in order to develop sensitive diagnostic tests and vaccines which will be used to implement control programs. Domestic diseases that are emerging production issues are: drug resistant coccidiosis in poultry, porcine reproductive and respiratory syndrome (PRRS), Johne's in cattle, and leptospirosis. Diseases of emerging concern in wildlife that may affect livestock production and visa versa are: tuberculosis, brucellosis, and chronic wasting syndrome which may be a prion disease such as scrapies in sheep. Domestic livestock diseases that are emerging food safety issues are: E. coli 0157, cryptosporidiosis, Johne's (paratuberculosis), salmonella in cattle, swine, and poultry, campylobacter in poultry and swine. Exotic diseases of emerging importance are: vesicular stomatitis, heartwater, bovine spongiform encephalopathy, exotic strains of avian influenza, new exotic variants of hog cholera, gastrointestinal parasites introduced by importation of livestock and wildlife, and arboviruses such as Bluetongue, Ebola, and Hanta.

Question. Identify funding requirements.

Answer. The proposed FY 1997 budget for ARS requests additional funding of \$2,500,000 for animal health and pathogen reduction research which is related to both production efficiency and human food safety.

Question. ARS has a number of animal science laboratories. Please explain the distinction of the research at these centers.

Answer. ARS has four major animal science centers/institutes. The Plum Island Animal Disease Center (PIADC), Greenport, New York, is responsible for research diagnosis to protect U.S. animal industries and exports against catastrophic economic losses caused by foreign animal disease agents. The National Animal Disease Center (NADC), Ames, Iowa, conducts basic and applied research on selected diseases of economic importance to the U.S. livestock and poultry industries. The Roman L. Hruska U.S. Meat Animal Research Center (MARC), Clay Center, Nebraska, is responsible for developing scientific information and new technology to increase efficiency of production and product quality as related to the U.S. beef, sheep, and swine industries. The Livestock and Poultry Sciences Institute (LPSI), Beltsville, Maryland, is responsible for conducting fundamental research to improve genetic evaluation techniques for dairy breeding industry, develop knowledge of the genomes/germplasm of livestock, identify factors that affect growth, parasitic diseases, and conservation of dietary nutrients of livestock and poultry, and to enhance the quality and safety of meat and meat products.

In addition, ARS has animal sciences laboratories at a number of locations that focus on regional problems such as aquaculture, forage/grazing land production systems, and other animal health related issues.

Question. Provide current funding and staffing levels for each.

Answer. The current funding and scientific staffing levels for animal science research are as follows:

Location	FY 1996	
	Funds	Scientists
Auburn, Alabama	\$ 850,400	2.0
Tucson, Arizona	29,600	--
Booneville, Arkansas	1,621,500	3.9
Fayetteville, Arkansas	982,200	4.0
Brooksville, Florida	537,300	2.0
Gainesville, Florida	4,660,700	18.0
Athens, Georgia	4,261,400	13.0
Hilo, Hawaii	1,628,900	--
Dubois, Idaho	1,718,000	3.6
Peoria, Illinois	929,300	--
West Lafayette, Indiana	995,600	3.0
Ames, Iowa	191,100	1.0
Ames, Iowa (NADC)	18,561,600	50.0
Beltsville, Maryland (LPSI)	24,028,200	57.0
East Lansing, Michigan	2,732,800	9.0
St. Paul, Minnesota	196,700	1.0
Mississippi State, Mississippi	826,700	3.7
Stoneville, Mississippi	1,977,300	2.4
Columbia, Missouri	635,400	2.0
Miles City, Montana	1,796,400	5.4
Clay Center, Nebraska (MARC)	11,796,900	37.4
Lincoln, Nebraska	883,800	4.0
Ithaca, New York	268,600	1.0
Greenport, New York (PIADC)	9,954,100	7.0
Raleigh, North Carolina	151,200	0.8
Fargo, North Dakota	941,400	1.6
El Reno, Oklahoma	300,800	0.4
Wyndmoor, Pennsylvania	211,000	0.6
Bushland, Texas	311,300	1.2
College Station, Texas	2,177,100	8.7
Kerrville, Texas	2,969,400	10.0
Weslaco, Texas	23,600	--
Logan, Utah	1,658,600	6.7
Pullman, Washington	2,080,800	7.0
Beckley, West Virginia	443,300	1.4
Madison, Wisconsin	1,590,000	5.5
Cheyenne, Wyoming	446,200	.8
Laramie, Wyoming	2,221,800	5.7
Panama City, Panama	1,008,200	2.0
H.Q. Administered Funds	3,740,700	--
Total	112,360,000	282.8

LOWER MISSISSIPPI DELTA NUTRITION INTERVENTION RESEARCH INITIATIVE

Question. Please describe your progress in establishing and coordinating research and intervention activities in the Lower Delta.

Answer. The initiative is well on its way toward the goals established in the opening Visioning Conference in April 1995. In the past year, the initiative has:

- created a team among seven disparate institutions of widely different perspectives and established an organizational working structure;
- collected and organized all relevant existing information on regional ecology and sociodemographics, community resources, health and nutritional status, demographics, and food security and accessibility into a monograph to be published in the summer of 1996;
- held two symposia with internationally renowned experts on community intervention and dietary assessment;

- established criteria for community selection used by the State institutions to identify the 10-15 communities within each of the three States from which the final set of communities will be chosen; and
- disseminated to all institutions the first draft of the research design.

Question. Please list objectives and funding by participants in the Lower Mississippi Delta Nutrition Intervention Research Initiative.

Answer. The overall objective of the research initiative is to identify interventions having potential to remediate significant nutritional problems found in the Lower Mississippi Delta (LMD) and validate their effect. Identification of relevant options for intervention requires the following subobjectives:

- collation and review of existing data describing the socioeconomic, nutritional and health status of LMD residents,
- collation and review of existing nutrition and community assessment research methodologies and selection of appropriate methods of assessment,
- assessment of nutritional status of population and community factors impacting nutritional status,
- selection and design of strategies that can have significant nutritional impact and are amenable with community characteristics,
- implementation of interventions and design of appropriate methodologies for impact evaluation.

All seven partners in the consortium which include ARS, Alcorn State University, Arkansas Children's Hospital Research Institute, Pennington Biomedical Research Center, Southern University and A&M College, University of Arkansas at Pine Bluff, and the University of Southern Mississippi work on all of the objectives of the initiative; there is no division of tasks by institution. Funding of \$2,436,400 is equally divided among the seven partners.

Question. What is your overall funding?

Answer. FY 1996 funding is \$2,436,400.

Question. How much is included in the FY 1997 request?

Answer. The FY 1997 request is essentially the same as FY 1996, \$2,409,100.

Question. Describe your accomplishments to date.

Answer. Accomplishments for the first year of the initiative are significant. The seven disparate member institutions have joined forces and formed a working partnership. An organization structure of committees and assigned responsibilities is in place. Existing data on socioeconomic, nutritional and health status of residents in the Lower Mississippi Delta have been collected and a monograph of these data will be published shortly. Criteria for community selection have been agreed upon and plans for community assessment are underway.

Question. To what extent do you classify your activities as intervention as opposed to research?

Answer. This is a research initiative. It will determine the health and nutritional status of Delta residents; design and test intervention strategies that address prevalent nutritionally-responsive health conditions; and transfer these findings to appropriate action agencies.

Question. Are the planned funding levels going to be adequate to provide meaningful data and intervention strategies over the expected time frame for the project?

Answer. Current funding is sufficient to conduct community assessments and to plan dietary and biological assessments of Delta residents. Future funding requests will be determined based on dietary and biological assessments needed to complete field research. The initial proposal requested an increase of \$2 million per year until an annual budget of \$10 million is reached. This level of funding would allow longitudinal studies of selected subpopulation groups of Delta residents and testing of carefully

designed and sustainable interventions with Delta residents who are at-risk for a variety of nutritionally-related health outcomes.

Question. Are opportunities increasing for collaboration among the six participating institutions and USDA?

Answer. During the year of collaboration, many linkages have been developed among the seven partners. The steering and research committees and most of the working committees have representatives from all of the institutions. Ways of extending the collaboration and interacting with other groups are being addressed by the Steering Committee.

HUMAN NUTRITION RESEARCH

Question. Last year the Congress provided additional funding for human nutrition research, specifically in the area of nutrition and chronic diseases. How were these funds implemented and what was the nature of the planned research?

Answer. The additional funds were allocated for the following purposes:

At the Children's Nutrition Research Center, Houston, Texas, additional research was directed to the relationship between newly discovered genes for obesity and appetite regulation and the propensity for chronic obesity.

Scientists at the Human Nutrition Research Center on Aging, Boston, Massachusetts, will expand nutritional neurology to identify food components and mechanisms of their action in reduction of damage of neural tissue.

The Beltsville Human Nutrition Research Center, Beltsville, Maryland, will employ a scientist to lead in adopting systems analysis to evaluate nutrient requirements for the delay of chronic diseases.

At the Western Human Nutrition Research Center, San Francisco, California, expertise will be added to identify specific indicators to predict deficits in immune function.

Question. What is the current funding and staffing levels for each of the major centers and locations carrying out human nutrition research? Please explain the major objectives of each center's research.

Answer. The funding and staffing for the ARS Human Nutrition Research Centers and other related programs for FY 1996 are provided for the record.

<u>Centers and Other Related Programs</u>	<u>FY 1996</u>	
	<u>Funding</u>	<u>Staffing</u>
Beltsville Human Nutrition Research Center Beltsville, MD	\$18,689,200	88
Grand Forks Human Nutrition Research Center Grand Forks, ND	8,081,600	12
Human Nutrition Research Center on Aging at Tufts University, Boston, MA (Includes Geriatric Nutrition Res, Danville, PA)	14,864,200 (200,000)	41
Children's Nutrition Research Center at Baylor College of Medicine, Houston, TX	10,841,400	25
Western Human Nutrition Research Center San Francisco, CA	5,372,000	12

Children's Hospital Little Rock, AR	1,393,000	4
Nutrition Intervention Study (LA, AR, MS)	2,436,400	13
National Agricultural Library	800,000	7
Other Locations	<u>1,545,600</u>	<u>7</u>
Total	64,023,400	209

Of the total 209 staff, 132 are Federal FTE and 77 are cooperator employees.

The major objectives of research carried out at each of the six ARS Human Nutrition Research Centers and in related human nutrition research programs are as follows:

Beltsville Human Nutrition Research Center, Beltsville, Maryland, develops new methods of food analysis; studies the role of nutrients in human nutrition and their interaction to maintain health; conducts nutrition monitoring and maintains the database of the nutrient content of foods; studies the expenditure of energy using direct and indirect calorimetry; and conducts reliable studies of free-living humans.

Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, Boston, Massachusetts, determines factors related to prevention of age-related loss of bone density leading to osteoporosis and fracture, preservation of muscle strength, identifies dietary factors critical in slowing or preventing cataract development, studies the relation of antioxidant food components to heart disease and immune function, and explores relationships between vitamins and brain function, stroke and dementia.

Grand Forks Human Nutrition Research Center, Grand Forks, North Dakota, determines the importance of mineral elements at the molecular level with an emphasis on chronic disease, identifies detrimental functional changes, especially in bone, brain, cardiovascular, and reproductive systems that occur in the U.S. population because of improper mineral element nutriture; identifies and validates biochemical and physiological status assessment indicators that can be used in the study of populations that are likely to suffer from inadequate mineral element nutriture; and defines the impact of environmental, dietary, physiological, and psychological stressors on mineral element requirements.

Children's Nutrition Research Center, Baylor College of Medicine, Houston, Texas, establishes nutrient requirements to prevent low birth weight babies, particularly in pregnant adolescents; studies nutrient-gene interactions that regulate metabolism and disposition of nutrients; determines nutrient requirements for growth and development of school-aged and adolescent children; and establishes nutritional connections to acute and chronic childhood illnesses.

Western Human Nutrition Research Center, San Francisco, California, is establishing markers of nutritional status in relation to maintenance of healthy body weight; nutrition, infection and immune disorders; and protective factors in foods.

Arkansas Children's Hospital Research Institute, conducts research on the effects of diet on cognitive functions and development of children. Health effects of childhood exposure to plant foods (phytochemicals) is another major area.

Related Research Programs. Research on nutritional qualities of plants and animals is conducted at ARS regional research laboratories in Peoria, Illinois, Albany, California, and the Plant, Soil and Nutrition Laboratory at Ithaca, New York.

Question. What coordination is carried out between ARS, NIH and University human nutrition research activities? Who are the major participants in this field?

Answer. Nutrition research is competitively funded by NIH and CSREES in universities. Few of these Universities have facilities to conduct live-in controlled diet studies of suitable numbers of volunteers such as are conducted at ARS Human Nutrition Research Centers. ARS Nutrition Research Center Directors meet regularly to review our programs in relation to other nutrition research and national needs. ARS scientists have all research proposals peer reviewed and publish in peer reviewed Journals that assure effort is not duplicated.

In Federal human nutrition research we have two formal interagency committees to assure coordination and information exchanges. They are the Interagency Committee on Human Nutrition Research (ICHNR) and the Interagency Board of Nutrition Monitoring and Related Research (IBNMRR). These groups are co-chaired by the USDA, Under Secretary for Research, Education, and Economics and the DHHS Assistant Secretary for Health. Each committee meets 3-4 times per year. The ICHNR compiles a report from the Human Nutrition Research Information Management System that, each year, shows the kinds of research conducted by each agency of the government.

IBNMRR coordinates through the National Nutrition Monitoring 10-Year Plan as specified in the National Nutrition Monitoring Act of 1990. These groups are very effective at promoting communication and were active in implementing the nutrition component of the OSTP-National Science and Technology Council Committee on Health Safety and Food National Forum held in November 1994.

In addition, ARS scientists have cooperative agreements with scientists at the National Institutes of Health to jointly address problems of mutual interest requiring their combined expertise. For example, we collaborate in efforts to reduce disease risk, such as heart disease and cancer. ARS nutrition scientists address the linkages between food and nutrient requirements for normal healthy people, whereas NIH is particularly interested in disease therapy.

In the food consumption, nutrition and health monitoring or epidemiology areas, ARS has expertise in determining food consumption and nutrient composition of food, and Centers for Disease Control and Prevention deals with indicators of nutritional status as related to health and disease. We have working groups to deal with specific complex issues such as folic acid requirements, food sources, and functions.

The major research programs in the field of human nutrition at the various universities in the U.S. include those at land-grant institutions as well as medical schools across the country. These include Cornell University, Ithaca, New York; University of California, Davis, and Berkeley, California; Iowa State University, Ames, Iowa; University of Illinois, Urbana, Illinois; Pennsylvania State University, University Park, Pennsylvania; University of Florida, Gainesville, Florida; Texas A & M University, College Station, Texas; and the University of Wisconsin, Madison, Wisconsin. Medical schools that have NIH-funded Clinical Nutrition Research Units are University of Chicago; University of California at Davis; University of Washington; Vanderbilt University; University of Colorado Health Sciences; Massachusetts General Hospital; Harbor-UCLA Medical Center; and Oregon Health Sciences Center. St. Luke's Roosevelt-Columbia University has a NIH-funded Obesity Center. Obesity and Nutrition Research Centers are at the University of Vermont, Burlington, Vermont; New England Medical Center, Boston, Massachusetts; and the University of Pittsburgh, Pittsburgh, Pennsylvania. The Pennington Biomedical Research Center in Baton Rouge, Louisiana, has a nutrition research program associated with the Louisiana State University medical and nutrition programs. The University of Southern Mississippi, Hattiesburg, has community nutrition research and food service management research programs.

AGROFORESTRY RESEARCH

Question. Please describe your research in agroforestry.

Answer. The agroforestry research conducted by ARS focuses on increasing income to small family farms in forested Appalachia and the mid-South, where rainfall is abundant but intensive agriculture can occupy only a small proportion of the land. Agroforestry has been highly successful in other parts of the world, but it has not been widely adapted to our economy and environment, or to the kinds of small-farm enterprises common in the eastern U.S. Trees are the most productive kinds of plants there, but forages and alternative crops are also needed. The basic objective is to develop diversified and value-added production systems which provide income during the 25 to 30 years required for growth of merchantable trees. In part, this involves the planting of genetically improved trees which provide products other than lumber, such as nuts, but spaced so that forages, niche-market or specialty crops like herbs, or other marketable crops can be produced between and beneath the trees. This research identifies compatible tree and understory species, develops integrated pest and weed management practices, and provides efficient management of inputs such as fertilizer. In addition, the research provides basic knowledge concerning the ways desirable trees and understory plants interact, either competing with each other or synergistically promoting greater growth by sharing the sun's energy, water, and nutrients, so that more efficient systems can be designed and evaluated. The ARS agroforestry program also explores ways that tree, shrub, and grass plantings can be used in soil and water conservation efforts, to stabilize streambanks, stop erosion, and improve water quality by capturing runoff water and sediment.

Question. Where is this research performed?

Answer. ARS conducts research specific to agroforestry at Booneville, Arkansas, and Beckley, West Virginia. Research on tree pest management and use of trees in waste management and erosion control that directly supports the agroforestry program is conducted at Florence, South Carolina; Oxford, Mississippi; Columbia, Missouri; and Beltsville, Maryland.

Question. What is the current and projected funding for this research?

Answer. Current and projected funding for agroforestry research is as follows:

<u>Location</u>	<u>FY 1996</u>	<u>FY 1997</u>
Booneville, AR	\$1,279,600	\$1,279,600
Beckley, WV	<u>445,400</u>	<u>445,400</u>
TOTAL	1,725,000	1,725,000

Question. Please discuss recent accomplishments in agroforestry research.

Answer. In FY 1993, funds were appropriated for agroforestry research at Beckley, West Virginia. In FY 1995, funds were appropriated to purchase land and initiate a program on agroforestry at Beckley, West Virginia. Black walnut and honey locust were planted in experimental spacings with various forage species on instrumented watersheds, on a very steep hillside with varying soil depth, typical of the region, for studies of productivity, water requirements, and nutrient cycling. Improved strains of black walnut, honey locust, and other trees with potential value for multiple-use plantings were selected and planted for evaluation. Other work being implemented in this new program addresses the use of desirable trees in the management of poultry waste water and litter, and an assessment of the value of new varieties of chestnut and hazelnut which produce high-carbohydrate nuts very soon after planting, as an early source of income.

Agroforestry research began at Booneville in FY 1992. There, ARS scientists developed the practice of harvesting the plentiful supplies of pinestraw for sale to homeowners and landscapers as mulch. This provides cash flow averaging about \$440.00 per acre annually, while pine plantings mature. ARS scientists at Booneville have demonstrated that various forages can be produced profitably within timber plantations of various spacings, and are defining the optimum numbers of trees and orientation of tree rows for maximizing production of forage in the tree understory. Working with cooperators from universities and other Federal agencies, Booneville scientists are adapting the New Zealand Forest Research Initiative's Agroforestry Estate Model to U.S. conditions and requirements. This computer model is a decision aid which provides a detailed management plan and predicts timber and crop yields and profits for any specific situation. It will be evaluated in the field this summer by agroforestry cooperators across the U.S. Booneville scientists and their cooperators at Langston University in Oklahoma also demonstrated that goats can be used profitably and effectively in place of herbicides to clear the vegetation from land, to control weeds and shrubs that would compete with tree seedlings.

BT COTTON RESEARCH

Question. Please describe your research on Bt Cotton.

Answer. Research on Bt Cotton is aimed at evaluating the effectiveness of various Bt gene constructs in transgenic plants for relative efficacy against the cotton bollworm and tobacco budworm and to evaluate this germplasm for its agronomic traits. In addition, some theoretical and applied studies have been conducted to evaluate the potential of various insect hosts to develop resistance to Bt and to evaluate methods of managing potential resistance buildup.

Question. Where is this research being performed?

Answer. This research is being conducted primarily in at Mississippi State, Mississippi, under Cooperative Research and Development Agreements (CRADAs) with four companies: Monsanto, Deltapine Seed Company, Paymaster Technologies, and Calgene. In addition, some general research on Bt resistance in caterpillar pests has been conducted at the Grain Marketing and Production Research Center in Manhattan, Kansas.

Question. What is the current and projected funding for this research?

Answer. Additional funding for this research has been provided through Cooperative Research and Development Agreements with funding from industry (\$134,250 total to date). Approximately \$100,000 of ARS base funding has supported Bt transgenic cotton research at Mississippi State, Mississippi. Similar ARS expenditures are projected for this research in the future. No specific Bt cotton research was funded in Manhattan, Kansas.

Question. Please discuss recent accomplishments.

Answer. ARS cooperated with Agracetus and USDA-APHIS to conduct the world's first field experiments on transgenic Bt cotton. This involved the development of containment protocols that are now the standard for all Bt transgenic field studies. ARS provided definitive data to cooperating companies that allowed the selection of Bt materials to be used in commercial products such as Bollgard marketed by Monsanto. Resistance management strategies such as the development of seed mixtures of Bt and non-Bt seed developed by ARS can be used as refugia without economic loss under heavy infestations of cotton bollworm or tobacco budworm. Other resistance management strategies using spatially distinct refugia have also been developed and were the focus of discussion in an ARS moderated conference held this spring in Bethesda, Maryland. Resistance monitoring methods were determined and ARS scientists will assist in following resistance levels in tobacco budworm populations associated with cotton fields planted to Bollgard Bt cotton in 1996 and 1997.

FRUIT AND NUT RESEARCH

Question. Describe your current program in fruit and nut research.

Answer. The current program in fruit and nut research includes research activities on many different fruit and nut crops including apples, pears, oranges, grapefruit, lime, lemon, plum, peach, prune, strawberry, raspberry, blueberry, grape, pecan, walnut, hazelnut and many minor tropical and subtropical crops. Projects include both pre- and post-harvest investigations for improved product varieties and quality. Projects at 35 locations involve both basic and developmental research in plant breeding and genetics, physiology, entomology, pathology, and engineering technologies.

Question. Where is it conducted? By location, provide major research objectives, current funding and staffing.

Answer. Research locations, current funding, staffing and major research objectives are provided for the record.

<u>Location</u>	<u>1996 Funding</u>	<u>Scientists</u>
Booneville, AR	\$ 191,900	0.3
Tucson, AZ	112,300	0.5
Albany, CA	3,157,100	11.9
Davis, CA	1,246,800	3.9
Fresno, CA	3,635,900	10.7
Riverside, CA	58,100	0.3
Salinas, CA	223,400	0.9
Ft. Collins, CO	89,700	0.4
Newark, DE	36,500	0.2
Winter Haven, FL	63,900	0.4
Montpellier, FR	206,200	0.8
Athens, GA	397,600	0.5
Byron, GA	2,658,900	7.0
Tifton, GA	51,600	--
Hilo, HI	134,200	0.3
Peoria, IL	144,300	0.6
Urbana, IL	2,200	--
New Orleans, LA	992,400	3.5
Beltsville, MD	4,584,500	15.9
Frederick, MD	246,300	0.9
Poplarville, MS	880,700	4.0
Stoneville, MS	134,800	0.5
East Lansing, MI	297,100	0.7
Geneva, NY	720,900	1.3
Wooster, OH	299,400	1.4
Lane, OK	190,000	0.6
Corvallis, OR	2,187,300	5.3
Wyndmoor, PA	427,000	1.7
Mayaguez, PR	39,400	0.1
College Station, TX	596,300	2.0
Weslaco, TX	201,000	0.5
Prosser, WA	26,900	--
Wenatchee, WA	1,535,800	3.0
Yakima, WA	3,196,600	5.1
Kearneysville, WV	5,317,200	16.0
Headquarters	<u>377,400</u>	<u>--</u>
TOTAL	34,661,600	101.2

Booneville, AR - Develop management practices for soil and water and implement agroforestry techniques on family farms.

Tucson, AZ - Improve bee pollination of crops and ecologically important plants.

Albany, CA - (1) Develop improved methods for detection of compounds affecting healthfulness and quality of foods; (2) control of nutritional properties of extruded cereal based foods; (3) detection of aflatoxin contamination in human foods by imaging technologies; (4) image analysis and other physical methods for

detection of unwanted matter in fresh and processed food for improved quality. Other projects include: (1) the modification of vegetable oils as raw materials for industrial uses; (2) development of edible coatings to keep lightly processed vegetables fresh; (3) devise innovative processing to develop value-added fruits and vegetables for foreign markets; (4) control aflatoxin in tree nuts using biocontrol procedures; and (5) genetically engineer resistance and reduce aflatoxin in tree nuts and figs by decreasing invasion of Aspergillus flavus caused by insects.

Davis, CA - Develop control practices for bacterial and viral diseases of fruit and nut trees and grapes, resistant rootstocks or cultivars, and chemical treatments to eliminate pre-plant fumigation with methyl bromide.

Fresno, CA - Develop quarantine/post-harvest control strategies to reduce losses by insect pests in the investigation of new fumigants and methodologies to reduce methyl bromide emissions. This includes: (1) research on reducing or eliminating chemical pesticides and developing alternative biological and physical treatments and integrated pest management control procedures. Research is also being done to develop alternatives to methyl bromide in the management of soil pests. In addition, Prunus and Vitis germplasm is hybridized for increased pest resistance, drought and salinity tolerance with improved fruit characteristics. Control post-harvest decay utilizing microbial biocontrol and improve commodity handling with reduced injury to fruit. Determine the feasibility of cropping systems utilizing subsurface drip irrigation to apply alternative fumigants as well as irrigation.

Riverside, CA - Determine the fate and transport of alternative fumigants to methyl bromide in field application. Salinas, CA - Develop biologically-based or chemical alternatives to methyl bromide as a soil fumigant for control of soilborne pests of strawberry as a component of integrated management strategies for suppression and control of soilborne pests in strawberry and vegetable crops.

Ft. Collins, CO - Determine the physiological and biochemical factors responsible for loss of seed viability and deterioration in storage and develop improved storage methods.

Newark, DE - Develop biological control of selected insect pests: Tarnished Plant Bug, Alfalfa Plant Bug, and Sweetpotato Whitefly (in greenhouses) and quarantine evaluation of predators of Russian Wheat Aphid.

Winter Haven, FL - Develop alternative chemical and non-chemical treatments for preserving quality and improving convenience of minimally processed fresh fruits and vegetables.

Montpellier, FR - Discover, collect, and ship to the U.S. new natural enemies to reduce populations of codling moth, gypsy moth, pear thrips, pear psylla, and apple ermine moth.

Athens, GA - Design, prepare and evaluate biodegradable fungicides, herbicides and insecticides.

Byron, GA - (1) Breed and develop deciduous peach fruit cultivars and rootstocks adapted to the Southeast. (2) Develop control strategies for insect problems of deciduous fruit. (3) Identify and develop improved cultivation and disease management strategies for pecan. (4) Identify factors affecting the nature and occurrence of disease and nematode problems of deciduous fruits in the southeastern U.S. (5) Develop disease and nematode management procedures based on biological control and nonchemical methods for the management of post-harvest diseases of stone fruits. (6) Develop alternative methods of biological control for insect pests of pecan.

Tifton, GA - Determine pesticide residues in food crops in support of petitions to EPA through the IR-4 "Minor Use" project for registration or reregistration of pesticide use.

Hilo, HI - Develop novel and more efficient semiochemical based eradication technology for fruit flies.

Peoria, IL - Identify biologically active natural products and determine their potential for commercial exploitation as herbicides, fungicides, and plant growth regulators.

Urbana, IL - Develop control measures for weeds in vegetables, fruits and specialty crops and determine pesticide residues in harvested products.

New Orleans, LA - This multifaceted research program includes: (1) investigation on the conversion of commodity by-products (nut shellers, grain millers, oilseed crushers) to value-added adsorbents and the optimization of adsorbent properties for removal of metals and organics; (2) immunological studies on enzymes involved in aflatoxin formation to investigate processes of aflatoxin formation; (3) clone genes governing aflatoxin formation in studies designed to select plants expressing compounds inhibitory to aflatoxin formation; and (4) optimize the flavor and texture of fresh cut fruit products and develop methodologies for predicting food sensory quality to meet consumer demand.

Beltsville, MD - (1) establish and implement area-wide pest management for high priority agricultural pests of fruit and other crops; (2) develop instrumentation to nondestructively assess apple fruit quality; (3) develop methods to utilize gypsum byproducts for use in field soil applications of fruit crops; (4) enhance the development of blueberry cultivars utilizing molecular techniques to manipulate the chilling required for flowering; (5) develop methods to genetically transform raspberry and regenerate plants in tissue culture; (6) develop and introduce new germplasm and cultivars of small fruits, such as blueberry and strawberry, that are pest and disease resistant; (7) develop molecular methods for detection and control of viruses and viroids in fruits; (8) process prohibited foreign germplasm through quarantine and deposit in U.S. repositories; (9) develop molecular methods to detect and identify phytoplasma pathogens in plants; (10) transfer genes and develop tissue culture methods to improve peach, apple and pear; (11) increase quality and shelflife of fruit by controlling ripening and softening; (12) reduce the use of fungicides in control of post-harvest decay; and (13) determine the role of membrane lipid metabolism and composition in fruit ripening, senescence and quality.

Frederick, MD - Identify casual agents of graft and insect transmissible disorders of foreign horticultural germplasm and develop rapid methods of detection of exotic pathogens.

Poplarville, MS - Develop new and improved muscadine grape and other small fruit cultural practices, management techniques and germplasm for the Gulf States Region to increase yield, minimize production losses and conserve natural resources.

Stoneville, MS - Develop and integrate biological and other non-pesticidal methods for control of insect and mite pests of pecan.

East Lansing, MI - Develop, evaluate and implement new technologies to reduce post-harvest handling damage and nondestructively measure fruit quality for fresh markets and maintain U.S. competitiveness in international markets.

Geneva, NY - Acquire, maintain, characterize and distribute apple, grape, and sour cherry genetic resources from this national collection.

Wooster, OH - Develop improved spray application technology for crop protection using surfactants to reduce crop damage, reduce cost and energy use as well as pollution of the environment.

Lane, OK - Characterize the physiological changes occurring during storage and ripening of small fruits and utilize this information to develop practices leading to increased shelflife.

Corvallis, OR - Evaluate genetic variability within raspberry, blueberry, and strawberry and identify traits, individuals and populations valuable to breeding programs.

Wyndmoor, PA - Develop and utilize pectin by-products from fruit in the production of biodegradable polymers.

Mayaguez, PR - Acquire, preserve, characterize and distribute valuable tropical and subtropical germplasm.

College Station, TX - Characterize genetic diversity of existing pecan and hickory cultivars and develop improved pecan cultivars with disease and pest resistance.

Weslaco, TX - Develop a systems approach to quarantine security for tropical and subtropical fruits with emphasis on fruit flies.

Prosser, WA - Develop chemical control measures for weeds in fruit crops and determine herbicide residues in crops and soils.

Wenatchee, WA - Determine the factors that influence the development of fireblight disease and develop environmentally sound management practices.

Yakima, WA - (1) Develop new control methods for green peach aphid and Colorado Potato Beetle utilizing beneficial agents in biological control; (2) develop areawide control program for codling moth using pheromones sterile insects and other biological control agents; (3) determine the amount persistence and fate of insect control chemicals and their toxic breakdown products; and (4) provide efficacy, phytotoxicity, and yield data residue samples for analyses to support the registration of minor use pesticides.

Kearneysville, WV - (1) Identify and isolate genes affecting fruit development; (2) develop enhanced pear and plum cultivars with disease and pest resistance and improved fruit yield and quality; (3) identify and characterize genes associated with cold hardiness and stress resistance; (4) develop pest management methods to reduce pesticide use in deciduous fruit tree production systems; (5) develop plant-based technologies to treat water and concurrently produce a high-value product; (6) develop principles and mechanisms for improved harvesting of fruits for fresh market; (7) develop improved orchard practices affecting fruiting, fruit development and stress tolerance; (8) develop information on interactions between soilborne pests, root development and plant growth; (9) evaluate cover crop species and organic amendments on soilborne disease organisms and weeds as alternatives to methyl bromide; (10) examine the effects of cultural management techniques on the severity of fireblight in apple; (11) develop fundamental knowledge of the microbial community on fruit surfaces and methods for control of pre- and post-harvest disease and soilborne disease; and (12) develop nondestructive sensors measuring the post-harvest quality of apples and incorporate the sensing techniques into an automatic inspection system for sorting apples based on surface and internal defects.

Headquarters - Staffing and operation of national clonal repositories for plant germplasm including fruits.

SMALL GRAINS RESEARCH

Question. Describe your current program for each of the small grains research.

Answer. The small grains include wheat, oat, barley, and rice. We have research on wheat at 42 locations, oat at 15 locations, barley at 15 locations, and rice at 18 locations. The ARS small grain research program is a nationally managed, fully coordinated, multidisciplinary approach to solving production and post-harvest issues. The objectives of this research by location are provided for the record.

Wheat

Aberdeen, Idaho	Preserve and evaluate germplasm
Albany, California	Genetic modification and transformation, product utilization, and gene action
Athens, Georgia	Product composition and value
Auburn, Alabama	Management systems
Beltsville, Maryland	Stress physiology, disease resistance mechanisms, and production systems
Bozeman, Montana	Cereal quality genetics and weed and insect management
Brookings, South Dakota	Production systems
Cheyenne, Wyoming	Production systems
College Station, Texas	Aerial Application Technology
Columbia, Missouri	Wide-crossing and cytogenetics

Corvallis, Oregon	Stress physiology
El Reno, Oklahoma	Production systems
Fargo, North Dakota	Host-plant resistance, cytogenetics, and quality evaluation
Fort Collins, Colorado	Germplasm preservation
Frederick, Maryland	Exotic diseases
Gainesville, Florida	Stored product insects
Geneva, New York	Genomic database management
Griffin, Georgia	Cereal rust epidemiology
Ithaca, New York	Virology
Lincoln, Nebraska	Genetic enhancement with emphasis on quality and virus diseases
Logan, Utah	Wide crossing of different species
Lubbock, Texas	Production systems
Madison, Wisconsin	Basic pathology of fungal pathogens
Mandan, North Dakota	Production systems
Manhattan, Kansas	Resistance to Hessian fly and rusts and alien gene introgression
Montpellier, France	Biocontrol
Morris, Minnesota	Production systems
Newark, Delaware	Biocontrol
Peoria, Illinois	Toxin research
Pendleton, Oregon	Management systems
Pullman, Washington	Stress physiology, genetic improvement, disease resistance, and quality evaluation
Raleigh, North Carolina	Disease resistance
Riverside, California	Salt tolerance
Sidney, Montana	Management systems
St. Paul, Minnesota	Spring wheat improvement and cereal rust research
Stillwater, Oklahoma	Insect control through host-plant resistance and biocontrol agents
Stoneville, Mississippi	Insect management
Temple, Texas	Sustainable agriculture
Urbana, Illinois	Virology
West Lafayette, Indiana	Mechanisms of resistance to disease and insects
Wooster, Ohio	Quality evaluation
Headquarters	Administrative activities
Oat	
Aberdeen, Idaho	Germplasm preservation, evaluation, and enhancement
Albany, California	Gene action and quality trait evaluation
Ames, Iowa	Molecular basis of disease resistance
Beltsville, Maryland	Stress physiology
Brookings, South Dakota	Insect vectors of virus diseases
Fargo, North Dakota	Quality trait research
Griffin, Georgia	Cereal rust epidemiology
Ithaca, New York	Virology
Madison, Wisconsin	Quality and nutrition trait evaluation and enhancement
Montpellier, France	Biocontrol
Newark, Delaware	Biocontrol
Raleigh, North Carolina	Disease resistance and cold tolerance
St. Paul, Minnesota	Genetic engineering and rust pathology
Urbana, Illinois	Virology
West Lafayette, Indiana	Mechanisms of resistance to diseases and insects
Barley	
Aberdeen, Idaho	Germplasm preservation, evaluation and enhancement
Albany, California	Gene action and transformation
Ames, Iowa	Molecular biology
Beltsville, Maryland	Stress physiology

Brookings, South Dakota . . .	Insect vectors of virus diseases
Fargo, North Dakota . . .	Genetic transformation and virology
Griffin, Georgia	Cereal rust epidemiology
Ithaca, New York	Virology
Madison, Wisconsin	Malting quality and plant physiology
Montpellier, France	Biocontrol
Newark, Delaware	Biocontrol
Raleigh, North Carolina . . .	Winter hardiness and disease resistance
St. Paul, Minnesota	Rust pathology
Urbana, Illinois	Virology
West Lafayette, Indiana . . .	Mechanisms of resistance to disease and insects

Rice

Aberdeen, Idaho	Germplasm preservation
Albany, California	Product utilization and value
Athens, Georgia	Plant Structure and composition
Beaumont, Texas	Variety development
Beltsville, Maryland	Stress physiology
College Station, Texas	Aerial application
Davis, California	Molecular genetics
Frederick, Maryland	Exotic diseases
Gainesville, Florida	Stored product insects
Geneva, New York	Genomic database management
Houston, Texas	Children's nutrition
Ithaca, New York	Mineral nutrition
Madison, Wisconsin	Fungal pathology
Manhattan, Kansas	Stored product insects
Mayaguez, Puerto Rico	Tropical agricultural systems
New Orleans, Louisiana	Product development
St. Paul, Minnesota	Wild rice research
Stuttgart, Arkansas	Germplasm evaluation and enhancement

Question. Please describe and identify recent accomplishments in this research.

Answer. More than 400,000 samples distributed to breeders and researchers worldwide from the National Small Grains Collection in the past decade have been broadly utilized for cultivar development and new scientific discoveries. Rapid immunological tests have been developed to identify wheat carrying the 1RS rye chromosome. This technology is important because of the relationship to wheat quality. Thousands of wheat, oat, and barley lines have been evaluated for resistance to barley yellow dwarf virus (BYDV). Identification of resistance has been a major factor in controlling this devastating disease. 'Crystal' and related germplasm has been widely used in cultivar improvement programs and appears in virtually all two-rowed malting barley cultivars in the western U.S. Techniques have been established that allow development of wheat with multiple doses of rye chromosome segments. Highly successful varietal development programs have been conducted for club wheat (Washington), malting barley (Idaho), spring wheat (Minnesota) and rice (Texas). The best currently available scab resistance in wheat has come from the ARS program at St. Paul. ARS scientists identified and incorporated resistance to the Russian wheat aphid (in both wheat and barley) thereby helping solve a major pest problem for producers. Pedigree analysis of the rice germplasm collection demonstrated to rice breeders the need for inclusion of a broader range of germplasm.

An ARS scientist was successful in combining the most unrelated crop species known to produce fertile, stable partial hybrids--haploid plants were produced from a cross of oat by corn. This provides a source of doubled haploid oat plants as a tool for more rapid germplasm development. Wheat x barley hybrids have also been produced and the chromosome pairing studied. A complete set of D-genome disomic substitutions was developed in Langdon durum wheat. Aneuploid sets were distributed to more than 90 scientists in 19 countries.

Information from oat cultivar identification studies was used to select parents for the oat genome mapping project (coordinated by Quaker Oats). ARS scientists produced cDNA libraries and clones which provided a source for many single copy gene probes used by the North American Barley Gene Mapping Project. Number, chromosome location, and gene action of genes were determined using RFLP markers and a mapping population developed from two high-yielding altered rice cultivars. A routine genetic transformation technique was developed to introduce agronomically important genes into durum wheat. Markers associated with conferring tolerance to BYDV infection have been identified.

The use of controlled freeze tests has allowed the identification of germplasm for breeders to incorporate new genes for freezing resistance in adapted oat cultivars. Proteins have been identified and characterized that may contribute to degradation of reserve carbohydrates in grain. This research is leading to new strategies for improved starch hydrolysis in malting barley. Protein kinase mRNA that is responsive to dehydration and cold temperatures has been cloned and characterized. This research has shown the functional role of protein kinases in signalling plant responses to environmental stress.

New sources of resistance to Hessian fly have been identified and incorporated into 13 wheat germplasm lines and two cultivars released with Purdue University. Two parasitoid species that attack the Russian wheat aphid were identified and released in the Central Great Plains.

ARS scientists have determined how the causal organism of Karnal bunt infects wheat plants and how kernels become diseased. A single PCR assay was developed, which is capable of detecting all five BYDV strains and most other luteoviruses. An expert system (MoreCrop) was developed for predicting wheat and barley rusts, assessing losses, and controlling diseases. The first resistance gene for BYDV in oat has been identified and mapped. The molecular basis for host resistance to barley stripe mosaic virus has been determined.

Low phytic acid mutants have been generated and identified in corn, barley, and rice. The potential impact of this research on animal production is enormous. Low phytic acid feeds will allow the animals (poultry, swine, and fish) to utilize phosphorus in these feed grains, which would otherwise be unavailable and would be included in animal waste. The potential benefit is thus two-fold--increased feed efficiency and reduced ground water pollution. Wheat quality genes have been characterized to the point of establishing the practicality of protein engineering for enhanced wheat quality. The first reproducible and reliable method of transforming genes into wheat provides the basic technology for developing wheat with enhanced product quality and agronomic performance.

More than 10,000 oat lines have been evaluated for β -glucan in oats. This is the cholesterol lowering component of oat fiber and the percentage in an oat kernel ranges from about 2-8 percent. Additionally, oil percentages range from about 5-17 percent and protein from about 14-27 percent. The potential to design oat, and other cereals for specific food and feed uses, is becoming a reality. The quality standards of U.S. varieties of wheat, malting barley, and rice is assured by ARS quality evaluation laboratories.

A more comprehensive listing of accomplishments will be included in a soon to be printed report of a Grain Crop Improvement Review held April 22-26, 1996. We will make a copy available to your staff as soon as it becomes available.

Question. What is your current funding and staffing by location?

Answer. Current funding and staffing by location is provided for the record.

Wheat Research

<u>Location</u>	FY 1996	
	<u>Funds</u>	<u>Scientists</u>
Aberdeen, Idaho	\$434,900	0.7
Akron, Colorado	81,900	0.5
Albany, California	4,452,100	15.4
Athens, Georgia	1,421,800	5.3
Auburn, Alabama	40,600	0.2
Beltsville, Maryland	1,430,700	4.5
Bozeman, Montana	126,800	0.5
Brookings, South Dakota	244,100	1.1
Cheyenne, Wyoming	48,700	0.1
College Station, Texas	87,400	0.4
Columbia, Missouri	258,700	1.1
Corvallis, Oregon	217,000	1.0
El Reno, Oklahoma	179,800	0.2
Fargo, North Dakota	1,381,000	5.7
Fort Collins, Colorado	371,800	0.7
Frederick, Maryland	286,900	1.0
Gainesville, Florida	624,900	1.9
Geneva, New York	54,600	--
Griffin, Georgia	107,100	0.7
Ithaca, New York	482,100	1.8
Lincoln, Nebraska	801,100	3.6
Logan, Utah	30,000	0.2
Lubbock, Texas	129,000	0.4
Madison, Wisconsin	201,100	0.5
Mandan, North Dakota	356,800	1.2
Manhattan, Kansas	4,210,600	17.6
Montpellier, France	137,200	0.4
Morris, Minnesota	71,200	0.2
Newark, Delaware	152,500	0.5
Pendleton, Oregon	566,700	2.5
Peoria, Illinois	3,130,800	10.5
Pullman, Washington	2,022,300	7.3
Raleigh, North Carolina	168,000	0.9
Riverside, California	144,500	0.6
Sidney, Montana	191,800	0.7
St. Paul, Minnesota	1,000,700	4.6
Stillwater, Oklahoma	1,115,000	3.9
Stoneville, Mississippi	66,200	0.2
Temple, Texas	63,500	0.3
Urbana, Illinois	139,100	0.5
West Lafayette, Indiana	966,500	3.9
Wooster, Ohio	854,100	2.2
Headquarters	<u>1,800</u>	<u>--</u>
Total	28,853,400	105.5

Oat Research

<u>Location</u>	FY 1996	
	<u>Funds</u>	<u>Scientists</u>
Aberdeen, Idaho	\$674,900	2.0
Albany, California	248,700	0.7
Ames, Iowa	147,900	0.9
Beltsville, Maryland	29,900	0.1
Brookings, South Dakota	40,400	0.2
Fargo, North Dakota	207,300	1.1
Griffin, Georgia	45,900	0.3
Ithaca, New York	118,900	0.5
Madison, Wisconsin	332,300	1.4
Montpellier, France	91,400	0.3
Newark, Delaware	70,100	0.2
Raleigh, North Carolina	225,900	1.1

St. Paul, Minnesota	517,700	1.6
Urbana, Illinois	81,600	0.3
West Lafayette, Indiana	<u>182,100</u>	<u>0.7</u>
Total	3,015,000	11.4

Barley Research

Location	FY 1996	
	Funds	Scientists
Aberdeen, Idaho	\$572,100	1.8
Albany, California	484,400	1.3
Beltsville, Maryland	49,300	0.1
Bozeman, Montana	50,700	0.2
Fargo, North Dakota	452,300	2.2
Ithaca, New York	74,300	0.2
Lincoln, Nebraska	48,300	0.2
Madison, Wisconsin	714,800	2.8
Montpellier, France	91,500	0.3
Newark, Delaware	70,100	0.2
Pullman, Washington	97,700	0.5
Raleigh, North Carolina	22,100	0.1
Sidney, Montana	107,300	0.4
St. Paul, Minnesota	102,800	0.4
Stillwater, Oklahoma	440,400	1.6
Urbana, Illinois	81,700	0.3
West Lafayette, Indiana	<u>190,100</u>	<u>0.7</u>
Total	3,649,900	13.3

Rice Research

Location	FY 1996	
	Funds	Scientists
Aberdeen, Idaho	\$196,900	0.5
Albany, California	412,000	1.4
Athens, Georgia	329,500	1.2
Beaumont, Texas	979,400	4.2
Beltsville, Maryland	412,600	1.3
College Station, Texas	87,400	0.4
Davis, California	168,500	1.0
Frederick, Maryland	147,100	0.5
Gainesville, Florida	277,400	0.9
Geneva, New York	54,600	--
Houston, Texas	107,500	0.2
Ithaca, New York	51,000	0.2
Madison, Wisconsin	40,600	0.2
Manhattan, Kansas	293,200	1.3
Mayaguez, Puerto Rico	25,600	--
New Orleans, Louisiana	1,454,200	5.9
St. Paul, Minnesota	130,000	0.4
Stuttgart, Arkansas	<u>920,300</u>	<u>4.0</u>
Total	6,087,800	23.6

NEW USES RESEARCH

Question. ARS carries out a major effort in research to find new uses and process for agricultural commodities. Please identify by location, the research and funding for FY 1996 and 1997 in this area.

Answer. The focus of the ARS new uses research program is to enhance U.S. economies through the development of value-added food and industrial (nonfood and biofuels) products for domestic and export markets. The FY 1996 and 1997 funding for the ARS value-added food, nonfood, and biofuels research by location will be provided for the record. [The information follows.]

New Uses Research Funding FY 1996

Location	Nonfood	Food	Biofuels	Total
Phoenix, AZ	\$779,000	---	---	\$779,000
Albany, CA	3,330,000	\$4,708,300	\$335,900	8,374,200
Fresno, CA	70,600	414,700	---	485,300
Orlando, FL	---	365,700	---	365,700
Winter Haven, FL	430,900	978,900	---	1,409,800
Athens, GA	2,103,300	2,904,100	---	5,007,400
Dawson, GA	---	761,500	---	761,500
Tifton, GA	147,400	---	---	147,400
Hilo, HI	318,200	---	---	318,200
Ames, IA	129,400	---	---	129,400
Peoria, IL	13,787,800	2,970,600	2,902,100	19,660,500
Manhattan, KS	---	2,378,600	---	2,378,600
New Orleans, LA	10,137,100	3,797,000	---	13,934,100
Beltsville, MD	---	2,395,900	---	2,395,900
East Lansing, MI	---	121,500	---	121,500
Poplarville, MS	---	25,900	---	25,900
Stoneville, MS	1,706,500	---	---	1,706,500
Sidney, MT	112,600	---	---	112,600
Clay Center, NE	---	481,400	---	481,400
Lincoln, NE	---	89,100	---	89,100
Las Cruces, NM	1,079,800	---	---	1,079,800
Raleigh, NC	---	1,293,500	---	1,293,500
Fargo, ND	---	1,169,700	---	1,169,700
Wooster, OH	---	800,300	---	800,300
Lane, OK	152,300	890,200	---	1,042,500
Wyndmoor, PA	5,380,500	6,717,400	2,060,100	14,158,000
Clemson, SC	1,233,500	---	---	1,233,500
Beaumont, TX	---	149,800	---	149,800
College Station, TX	38,100	---	---	38,100
Lubbock, TX	541,900	---	---	541,900
Weslaco, TX	347,400	536,700	---	884,100
Pullman, WA	94,500	767,700	---	862,200
Wenatchee, WA	---	817,100	---	817,100
Madison, WI	155,700	538,500	---	694,200
NAL	9,100	---	---	9,100
Headquarters	369,600	---	496,500	866,100
	42,455,200	36,074,100	5,794,600	84,323,900

New Uses Research Funding FY 1997 (Proposed)

Location	Nonfood	Food	Biofuels	Total
Auburn, AL	---	---	\$506,000	\$506,000
Phoenix, AZ	\$779,000	---	---	779,000
Albany, CA	3,330,000	\$4,708,300	335,900	8,374,200
Fresno, CA	70,600	414,700	---	485,300
Orlando, FL	---	365,700	---	365,700
Winter Haven, FL	430,900	978,900	---	1,409,800
Athens, GA	2,103,300	2,904,100	---	5,007,400
Dawson, GA	---	761,500	---	761,500
Tifton, GA	---	---	363,000	363,000
Hilo, HI	318,200	---	---	318,200
Ames, IA	129,400	---	248,000	377,400
Peoria, IL	13,787,800	2,970,600	2,902,100	19,660,500
Manhattan, KS	---	2,378,600	---	2,378,600
New Orleans, LA	9,540,000	3,797,000	---	13,337,000
Beltsville, MD	---	1,937,200	---	1,937,200
East Lansing, MI	---	121,500	---	121,500
Poplarville, MS	---	25,900	---	25,900
Stoneville, MS	1,706,500	---	---	1,706,500
Sidney, MT	112,600	---	---	112,600
Clay Center, NE	---	481,400	---	481,400
Lincoln, NE	---	89,100	420,000	509,100
Las Cruces, NM	1,079,800	---	---	1,079,800
Raleigh, NC	---	1,074,100	---	1,074,100
Fargo, ND	---	1,169,700	---	1,169,700
Wooster, OH	---	800,300	---	800,300
Lane, OK	---	890,200	152,000	1,042,200
Wyndmoor, PA	5,380,500	6,717,400	2,060,100	14,158,000
Clemson, SC	1,233,500	---	---	1,233,500
Beaumont, TX	---	149,800	---	149,800
College Station, TX	38,100	---	---	38,100
Lubbock, TX	541,900	---	---	541,900
Weslaco, TX	347,400	536,700	---	884,100
Pullman, WA	94,500	767,700	---	862,200
Wenatchee, WA	---	817,100	---	817,100
Madison, WI	---	538,500	311,000	849,500
NAL	9,100	---	---	9,100
Headquarters	219,300	---	---	219,300
	41,252,400	35,396,000	7,298,100	83,946,500

Question. Please explain the recent accomplishments derived from this research.

Answer. Selected examples of accomplishments in developing value-added products and processes in each of the categories will be provided for the record. [The information follows:]

Low-fat cheese. To meet the challenge of reducing dietary fat intake for preadolescents, scientists at Wyndmoor, Pennsylvania, developed a low-fat Mozzarella cheese for use in USDA's National School Lunch Program. Many available low-fat Mozzarella cheeses were rubbery and did not melt. To prevent a similar outcome, a holistic research design was developed incorporating computer modeling, sophisticated evaluations of texture and meltability, and computer-enhance electron microscopy. The resulting Mozzarella cheese--with a 59 percent reduction in fat content and excellent meltability--was successfully tested in several Philadelphia schools and accepted by the Food and Consumer Services for use in the school lunch program. This combination of basic and applied research has also yielded a new understanding of fat-protein interactions and forms an information base to guide future developments in other low-fat cheeses and dairy foods, thus providing nutritious products with enhanced consumer acceptability.

Tenderizing meat in less than a millisecond. The Hydrodyne process presents a potentially revolutionary change in the way the meat industry tenderizes meat. The process is no more expensive than existing tenderizing techniques and offers major savings equivalent to 360,000 barrels of oil used for refrigerating meat in a conventional aging/tenderizing process. One out of every four beef steaks is less than desirable in tenderness/palatability leading to the need for a solution to tenderness variations in selected cuts and quality grades of beef. ARS scientists at Beltsville, Maryland, in cooperation with Hydrodyne, Inc., have found that an explosively-generated shock wave pressure front in water (Hydrodyne) alters those properties of meat that cause toughness. The process is clean, no foreign objects pierce or pummel the meat and there are no meat additives. It can be performed at any time after slaughter, regardless of livestock species, breed, or gender.

Spray dried butter powder for the baking industry. These powders were successfully substituted for conventional shortening in three types of baked goods. Butterfat's unsurpassed flavor, the ease of blending with other dry ingredients and the convenience of storage are obvious benefits of this type of shortening. Surpluses of butterfat have been steadily increasing world-wide because of consumer concerns about the fat and cholesterol contents of their diets. Although butter can be stored frozen for up to three years, freezer space is limited and thereby expensive. New approaches for utilization of this valuable food fat are needed. ARS scientists at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, have demonstrated that complete enclosure of butterfat droplets in food materials such as sugar or flour by spray drying offers a means for room temperature storage. As a result milkfat is protected from exposure to air and off-flavors do not develop.

Oatrim, a fat substitute. Oatrim is a bland, cream-colored powder made from oats by enzymatic conversion of the insoluble starch and beta-glucans into a soluble-fiber product with the performance characteristics of fat but not the calories (one calorie per gram versus 9 calories per gram for fat). Oatrim was invented and patented at the National Center for Agricultural Utilization in Peoria, Illinois, and is licensed to three U.S. companies for a variety of food uses. These include bakery goods, milk shakes and breakfast drinks, frozen desserts, salad dressing, meats and sausages, sauces and gravies. Besides lowering the fat content of foods, oatrim additionally has the effect of lowering blood cholesterol levels and the risk factors associated with diabetes.

Rice Fries, a low fat alternative. A food scientist at the Southern Regional Research Center, New Orleans, Louisiana, has come up with a crispy alternative using rice. The new fries start out as fine, white rice flour. After addition of water, the mixture is extruded and molded into a conventional french-fry shape. When fried, the snack is crispy on the outside and fluffy white on the inside. When analyzed, it is significantly lower in fat than the average potato french fry. A food processor in Crowley, Louisiana, is looking into manufacturing the new products. When commercialize, the product will provide a new outlet for broken kernels, a low-value byproduct of the rice milling industry.

Novel coatings increased shelf life and quality of fresh fruits and vegetables. Even with refrigeration, the shelf life of fresh produce is limited by shrinkage due to water loss and overripening. Scientists at Winter Haven, Florida, have devised two new coating technologies to address these problems. Nature-Seal, a recently patented edible coating, retards ripening of many fresh fruits and vegetables. This technology has been licensed to EcoScience of Worcester, Massachusetts, for use on papayas and limes. The other coating technology utilizes emulsions of nature waxes combined with currently used glossy coatings for citrus. These bi-layer coatings provide the necessary high gloss required by the industry, while greatly reducing the shrinkage that shortens shelf life and appearance.

Breakthrough achieved in processing starch with oil will increase utilization of corn and soybeans. Establishment of two Cooperative Research and Development Agreements, and several licensing agreements being developed, indicate strong industrial interest in a new product "Fantesk." Fantesk is the result of a discovery by ARS scientists at the National Center for Agricultural Utilization Research, Peoria, Illinois, on how to make a starch and oil material that does not separate. It is an intimate and inseparable combination of corn starch and soybean oil that has both food and nonfood uses. It can replace fat in foods such as ice cream, hamburger, and sausage. Nonfood applications include uses as a seed-coating material to incorporate microbial agents and agrichemicals, as an ingredient in glues and industrial coatings, and as an emulsifying agent in beauty and health care products.

Biodegradable films are now available for use with foods and industrial products. ARS scientists at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, have fabricated biodegradable and edible films from mixtures of high amylose starch, high methoxyl pectin, and glycerol. By varying the component composition, films with a wide range of mechanical properties can be obtained. Prior to the ARS work, it was believed that only low methoxyl pectins, crosslinked with divalent metals such as calcium, could form useful films. The ARS team discovered that mixtures of high methoxyl pectin, starch, and glycerol produce films with better mechanical properties than cross-linked low methoxyl pectins, at considerable lower cost. These films, which have been name "Agripol" because they are made from agriculturally-rather than petroleum-derived polymers, have potential applications as biodegradable, water soluble industrial films and coatings and as food grade films, coating, or beads. A patent has been filed on these films and a unique partnership with the Michigan Biotechnology Institute, who will aid in their commercialization, has been developed.

Core-Spun Yarns. Although they are unequaled in wear comfort, 100% untreated cotton fabrics and shrink and wrinkle, unlike similar fabrics made from synthetic fibers, such as polyester. In order to improve the performance of all-cotton fabrics, they are chemically treated to provide the desired properties such as durable-press shrink resistance or flame resistance. However, the application of chemical finishes generally results in substantial loss of fabric abrasion resistance, tensile and tear strengths, and hence, durability. To minimize these problems, cotton fibers are usually

intimately blended with suitable synthetic fibers. Unfortunately, some of the fabrics made of these different fiber blends still have certain deficiencies. Research at the Southern Regional Research Center, New Orleans, Louisiana, has led to the development of a special spinning technology for producing a unique "core-wrap yarn." As the name implies, the yarn is composed of a central core of a strong 100% synthetic fiber and a sheath (wrap) of 100% cotton fibers. The core and sheath firmly adhere with each other and do not strip or slip during processing or usage. The core of the yarn provides excellent mechanical/functional properties, such as high strength, durable-press, dimensional stability, etc., while the sheath provides the traditional properties of "King" cotton.

Lightweight concrete containing starch developed. ARS scientists at the Western Regional Research Center at Albany, California, have developed a method of making lightweight concrete using wheat starch. Starch is a renewable resource that is in abundant supply and could provide a viable alternative to lightweight aggregate for making lightweight concrete. Lightweight, insulative concrete is used in the building industry for nonstructural applications such as roof tiles, floors, and as insulation around fireplaces. Traditional methods of making lightweight concrete require either expensive air entraining equipment or a source of lightweight aggregate that may be in limited supply and obtained at a cost to the environment. The wheat starch, having the size and appearance of sand, is hydrated before being mixed into the concrete. Concrete with varying densities, strengths, and insulative properties have been made using the starch method.

Soy ink. The market opportunity and need for printing ink for newspapers and magazines based on 100 percent soybean oil, a renewable resource, in place of petroleum, a non-renewable resource derives from several environmental issues--biodegradability of petroleum-based inks, cost of waste disposal, and VOC (volatile organic compounds) emission regulation (EPA/OSHA). Several different ink formulations have been developed by scientists at the National Center for Agricultural Utilization Research, Peoria, Illinois, including lithographic-inks--newsprint, heat-set and sheet-fed--and flexographic water-based newsprint inks using 100 percent soy or other vegetable oil. Performance characteristics are equal or better, VOCs are eliminated and biodegradability is 90 percent in 2 weeks compared to 20 percent for all-petroleum vehicle. Market volume use of soy or vegetable oil in ink formulations is estimated at 1 billion pounds or eight percent of domestic soybean oil production and would represent a 300 percent increase in current industrial use of soybean oil.

Animal fats and restaurant grease as biodiesel fuel feedstocks. ARS researchers at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, used enzymatic approaches as alternative, energy-efficient ways to make biodiesel. These new approaches can make biodiesel fuels from animal fats that have improved low-temperature properties and, for the first time, allow the conversion of high free fatty acid-containing restaurant greases into biodiesel. The production of biodiesel as a replacement or extender for diesel fuel is currently based on the use of either soybean or rapeseed oil as the agricultural feedstock. The cost of the feedstock is about 75 percent of the total cost of making biodiesel. Cheaper feedstocks would make biodiesel more cost competitive with conventional diesel fuel. Animal fats and spent restaurant greases are a potential source of cheaper feed stocks. Biodiesel made from animal fats, however, has unacceptable low-temperature performance properties. Also, because of the high free-fatty acid content of restaurant greases, current biodiesel conversion technology is not compatible with these feedstocks.

A new process for the production of ethanol from citrus processing by-products. This new process can potentially improve our transportation fuel supplies and provide a new outlet for citrus processing by-products. Approximately one-half of the citrus fruit processed into juice and similar products remains in the form of peel and other by-products. These by-products cause disposal problems and provide marginal revenues for citrus processors. ARS scientists at the U.S. Citrus and Subtropical Products Research Laboratory, Winter Haven, Florida, in collaboration with a scientist at the University of Florida, developed a new process for the production of fuel grade ethanol from citrus processing wastes. All stages of the new process, based on environmentally benign enzymatic hydrolysis of citrus by-product to soluble sugars and fermentation of these sugars to ethanol by recombinant bacteria, have been developed and demonstrated on a bench scale.

Continuous ethanol production in a coupled fermentation-membrane pervaporation system. The productivity of ethanol fermentations, predominantly carried out as batch operations in the United States could be improved by adoption of continuous processing technology. Engineers at Wyndmoor, Pennsylvania, have successfully demonstrated continuous ethanol production in a pilot-scale system in which a concentrated ethanol product stream is recovered from the fermentor by a pervaporation, a membrane process of selectively separating multicomponent mixtures. The fermentor-pervaporation unit was operated for over 70 hours and generated a product stream of up to 25 percent ethanol. Conventional industrial processes result in a dilute product of 10 percent ethanol. Engineering cost analyses based on this research could lead to new, cheaper processes for fuel ethanol production and greater competitiveness for agricultural-based renewable fuels.

Question. How many cooperative partnerships with industry have resulted from research in this area.

Answer. More than 106 cooperative research and development agreements have resulted from research in this area.

Question. What are the prospects for further accomplishments?

Answer. The prospects for further accomplishments are excellent. ARS has adopted a market-rational approach to the development of value-added products in which market requirements for cost, performance, and physical properties must be clearly understood and the product developed must be equal or better than the product it is displacing. ARS is further committed to the concept that early involvement of industry is key to rapid development of value-added products, to successful development of new business opportunities, and to the creation of jobs.

NATURAL PRODUCTS RESEARCH

Question. Where does ARS carry out research in Natural Products?

Answer. ARS conducts natural product research primarily at two locations--the National Center for Agricultural Utilization Research in Peoria, Illinois, and the Richard Russell Research Center in Athens, Georgia.

Question. What resources are devoted to this research in FY 1996?

Answer. In FY 1996, natural product research at Peoria is funded at \$1.6 million; and, at Athens, natural product research is funded at \$2.7 million.

Question. What recent accomplishments have come out of this research?

Answer. Some of the results of this research will be provided for the record. [The information follows.]

- o Field tests indicate that high glucosinolate Brassica species could be effectively utilized in crop rotation management to suppress weeds and soil pathogens.
- o A U.S. patent application has been submitted for bacterial control of fusarium dry rot of potatoes.
- o Optimization of liquid culture production, drying and formulation of microsclerotia of the bioherbicide *Colletotrichum truncatum* was achieved. Formulation significantly increase effectiveness of the bioherbicide.
- o Corn lines with high levels of anti-corn earworm growth compounds, maysin, or related derivatives were identified in several inbred lines. A recessive gene that effects maysin content has been identified.
- o Yield of insecticidal sugar esters from various species of *Nicotiana* were determined and relative potency established. A method was developed for synthesis of sucrose esters similar to the natural product. Synthetic sucrose esters have comparable activity against nymphs and adult sweetpotato whitefly.
- o Two isoforms of an antimicrobial protein have been isolated from tomato fruit and tested against 6 different fungi. Both protein forms were found effective against *Verticillium* and *Phoma*.

Question. What is the status of the ARS/University of Mississippi Memorandum of Understanding (MOU) for the operations and staffing of the National Center for Natural Products?

Answer. Except for minor adjustments in wording, agreement has been achieved on the general MOU delineating the basis for collaboration. The plan for transfer of 5 ARS scientists and \$1.5 million to establish an ARS component within the National Center for Natural Products is en route to the subcommittee through the Department.

NURSERY CROPS RESEARCH

Question. Where does ARS conduct its nursery crops research? Please describe the program and funding for each location.

Answer. Nursery crops research is funded at 12 locations. A summary of project activities and funding for each location is provided for the record.

<u>Location</u>	<u>1996 Funding</u>
Washington, DC	\$5,079,800
Miami, FL	36,800
Montpellier, FR	90,300
Tifton, GA	77,200
Peoria, IL	93,300
Ames, IA	129,400
Beltsville, MD	548,000
Wooster, OH	338,000
Corvallis, OR	875,000
Logan, UT	20,900
Yakima, WA	15,100
Headquarters	<u>12,300</u>
TOTAL	7,316,100

Washington, DC - (1) Evaluate new floral crops and determine the effects of cultural practices on growth and flowering; (2) develop new methods to improve floral and nursery crops with enhanced flower color and disease resistance utilizing biotechnology; (3) select, evaluate, and develop cultivars of new trees and shrubs with improved growth habits and stress tolerance; (4) develop biologically-based alternatives to methyl bromide; (5) develop new approaches for disease control utilizing techniques of molecular biology in characterizing plant viruses; (6) identify biologically active natural products for insect control; (7) conduct efficacy and phytotoxicity tests to develop data in support of expansion of labels for minor use pesticides; (8) collect, identify and establish woody and herbaceous plants for public display; and (9) establish, develop, operate, and maintain an educational center for gardens and collections.

Miami, FL - Introduce, preserve, distribute and evaluate tropical and subtropical fruit and ornamental plants.

Montpellier, FR - Discover, collect, and determine the potential for biocontrol agents in controlling sweetpotato whitefly and export those with promise to the quarantine facility in the U.S. for distribution to the research community.

Tifton, GA - Evaluate the effectiveness and phytotoxicity of nematocides, fungicides, herbicides, insecticides, and acaricides for control of nematodes, diseases, weeds, insects and mites in minor use pesticide evaluation on ornamental and food crops.

Peoria, IL - Develop low-cost culture techniques for producing fungal and bacterial biocontrol agents and enhance viability of the microorganisms in storage.

Ames, IA - Obtain performance data and/or residue samples in support of minor-use pesticides registration for pesticide use on ornamental specialty and food crops.

Beltsville, MD - (1) Integrate practices to improve soil/crop health by analyzing interactions of biological and physical properties of organic amendments, and combine the use of biocontrol agents and organic amendments to increase crop tolerance to water, nutrient and pathogen stress; (2) identify microorganisms with potential for control of soilborne pathogens and transfer technology to industry; (3) conduct research on biocontrol of gypsy moth and turf insects; (4) develop and evaluate new methods for detection of phytoplasmas; (5) develop and coordinate uniform evaluation trials of turfgrass varieties.

Wooster, OH - Reduce damage and crop losses caused by selected insect pests of horticultural, turf and ornamental crops by developing alternative management strategies for pest control.

Corvallis, OR - (1) Investigate factors affecting seed quality and optimum production of forage and turf grass; (2) determine the effects of biocides on mycorrhizal fungi and produce new strains of these fungi resistant to biocides for possible use as an alternative to methyl bromide soil fumigation; (3) characterize changes in gene expression and levels of growth hormone in relation to flower induction; (4) investigate the distribution of products of photosyntheses in selected horticultural plants with and without mycorrhizal fungi associated with the roots; (5) develop technology to identify beneficial organisms to apply to roots to reduce stress and reduce disease severity; and (6) evaluate various fungicides, insecticides and herbicides for efficacy and phytotoxicity in support of floral and nursery crops label expansion through the IR-4 minor-use pesticide regional project.

Logan, UT - Evaluate and define existing turfgrass germplasms and characterize the genetic diversity to enhance germplasms with desirable traits for use by plant breeders.

Yakima, WA - Provide efficacy, phytotoxicity and yield data and residue samples for analyses to support registration or reregistration of minor use pesticides for control of insect pests.

Headquarters - Support minor use pesticide registration administrative activities.

Question. What major accomplishments have come from your research in this area?

Answer. The National Arboretum has introduced more than 100 new trees and shrubs during the past 70 years since the National Arboretum was established. The Arboretum has developed a wide range of plants with superior landscape qualities that are more disease and cold resistant and tolerant to urban stresses. For example, the Bradford pear introduced from the Arboretum is among the 10 most widely planted ornamental trees in the U.S. Other introductions include improved horticultural forms of crape myrtle, firethorn, viburnum, elm, magnolia, and holly. In addition, new flower introductions include lisianthus, kangaroo paw, ornithogalum and clematis for pot plant production. Many of these introductions are now produced and utilized nationwide and some introductions have been distributed abroad.

Question. Can you discuss the value of the nursery crops market, where it is located and the role for Federal research in this area?

Answer. The wholesale economic value of nursery crops in the U.S. is \$6.7 billion. The industry is composed of more than 42,000 farm enterprises with growers in every state. The role of Federal research is to collect and evaluate plant material, to breed new plant forms for greater environmental adaptation, improved resistance to pests and diseases, and esthetic characteristics to improve the quality of life for the 70 million Americans who are part of the gardening public.

Question. Similarly, what is the national economic value of Floriculture research?

Answer. The wholesale value of the floriculture crops in the U.S. was \$3.23 billion in 1994. This represented at 7 percent increase over 1992.

Question. What is the ARS effort in this area?

Answer. ARS currently devotes about \$4.4 million to floriculture crops.

NEW CROPS RESEARCH

Question. Provide the Committee with a list of the new crops ARS is researching.

Answer. A listing of the new crops for which ARS is conducting research will be provided for the record. [The information follows.]

ARS new crops research includes the following plant species: Cuphea, Vernonia, Helva, Meadowfoam, Crambe, Guayule, Jojoba, Lesquerella, Kenaf.

Question. What progress has been made in your research? What benefits have been derived by the marketplace from this research?

Answer. As a result of the agronomic and end-use research on new crops, several have been commercialized and new products have been introduced into the world market.

Meadowfoam--*Limnanthes alba* is being commercially grown in Oregon on about 3,000 acres, but it could be grown in other regions of the U.S. as well. This has resulted in revenue to farmers of \$1 million in 1995 and an expected \$3.8 million in 1996. Meadowfoam oil and derivatives in consumer products had a value of \$2.1 million in 1995 and the value will increase to \$7.6 million in 1996. Several new products from ARS research will be introduced into the market by industrial cooperators in 1996 and acreage is expanding.

Crambe--*Crambe abyssinica* is grown commercially in North Dakota and a derivative of the oil is being used industrially to keep plastic bags from sticking back together when they are made. This has resulted in \$3.25 million to farmers and an estimated \$25 million in crambe products in the marketplace..

Jojoba--*Simmondsia chinensis* is a perennial shrub being commercially grown in the desert Southwest for its unique oil on about 6,000 acres. The wholesale value of the oil and its derivatives (1.5 million pounds in 1995) is \$5.2 million in the current market (\$3.6 million in exports) and other parts of the plant will have added value in the near future.

Kenaf--*Hibiscus cannibinus* is a annual fiber crop grown in the Southern U.S. on 3,000-4,000 acres in 1995 for a number of specialty fiber applications. These include oil absorbents, drilling muds, horticultural growth media, nonwoven mats for growing lawns, animal bedding and several others. Use in high quality bond paper sold to environmental-conscious organizations is the primary market. Through an ARS cooperative agreement, engineers at Mississippi State University are developing a new harvesting and fiber separation system that may reduce processing and handling costs.

Several new crops are not yet commercialized.

Lesquerella--*Lesquerella fendleri* is a winter annual that can be grown in the Southern U.S. for its oil, gum, and meal. There is a large potential market for every product from lesquerella, so we would expect that several thousand acres could be supported by the value of the crop. Barriers to commercialization are the current incomplete development of high oil content, self-pollinating seed, reliable cultural practices and seed harvesting and cleaning equipment.

Guayule--*Parthenium argentatum* is a desert shrub that has been grown in Arizona, California, and Texas. Guayule produces natural rubber that has potential markets in non-allergenic surgical gloves and a resin that has potential in paints and coatings. Continued development of the fledgling guayule industry in areas such as agronomy and processing are needed to bring guayule to commercialization.

Hevea--*Hevea brasiliensis* is the natural rubber tree which is the source of the U.S.' imported natural rubber. There is research to determine the biochemical pathway and enzymes responsible for production of natural rubber in Hevea for incorporation into other plants, such as guayule, or organisms, but there is no research in ARS to domestically develop Hevea as a new crop in the U.S.

Cuphea--*Cuphea viscosissima* is native to the temperate regions of the U.S. and contains medium chain oils. Cuphea oil has the potential to replace oils that are now imported (1 billion pounds in 1991) as coconut and palm oils from tropical regions for use in detergents and other industrial products. For Cuphea to become a domestic crop, the wild seed needs to be domesticated by changing several of the wild seed's characteristics--like the tendency to scatter its seed before harvest and to require a dormant period before it sprouts.

Vernonia--*Vernonia galamensis* is native to Africa, but has been bred to grow in shorter day-length regions. Vernonia oil (epoxy oil) has the potential to replace solvents in paints and become part of the finished coating, which reduces air pollution from solvents. The domestication and commercialization of vernonia depends on development of high yielding cultivars and development of reliable agronomic practices.

Question. Please provide the Committee with actual obligations incurred for each line of research last year. What is the current and budgeted funding levels for each.

Answer. Information on actual obligation in FY 1995 and FY 1996 and FY 1997 planned funding levels for each new crop will be provided for the record. [The information follows.]

New Crops Funding

Crop	FY 1995	FY 1996	FY 1997
Cuphea	\$264,642	\$276,300	\$276,300
Vernonia	161,972	155,800	155,800
Hevea	258,274	262,100	262,100
Guayule	466,052	457,100	457,100
Lesquerella	579,706	567,800	567,800
Meadowfoam	99,744	98,000	98,000
Crambe	74,414	78,500	78,500
Jojoba	149,616	147,000	147,000
Kenaf	1,321,169	1,651,400	1,500,800

Question. When was the research initiated on these crops and when do you anticipate they will be completed?

Answer. Research on new crops began at the ARS regional research centers in about 1958 with the objective of collecting and evaluating seeds or other plant parts for their potential as economically viable crops. One estimate of when a new crop no longer needs support from new crops research is when the crop has been grown on 50,000 acres for 7 consecutive years. After this milestone is reached, the crop may be classified as an established crop. Under this guideline, any new crop currently being investigated will be supported by research for more than 5 years.

FUNDAMENTAL RESEARCH

Question. How much money does ARS commit for basic research?

Answer. ARS commits \$360,416,000 for basic research, which is approximately one half of the agency's appropriated research funds.

Question. How much of this research is classified as biotechnology research?

Answer. ARS is devoting \$81,962,000 in FY 1996 on biotechnology research as a component of its basic research effort. This amounts to 11.5% of the total ARS appropriation.

Question. Please identify current funding for plant genome and animal genome research.

Answer. The current funding is \$3,738,600 for plant genome research and \$7,335,700 for animal genome research.

Question. What portion of ARS' major research activities of Plant Sciences, Animal Sciences, etc., is basic, applied and developmental? Has this changed over the past 10 years?

Answer. The portion of ARS' major research activities of Plant Sciences, Animal Sciences, etc. devoted to basic, applied or developmental research are as follows:

Research Activity	Basic	Applied	Developmental
Soil, Water and Air Science	\$42,953,000	\$32,144,000	\$6,767,000
Plant Sciences	119,655,000	89,543,000	18,851,000
Animal Sciences	58,294,000	43,624,000	9,184,000
Commodity Conversion & Delivery	70,566,000	52,808,000	11,118,000
Human Nutrition Research	34,143,000	24,027,000	5,058,000
Integration of Ag Systems	15,340,000	11,480,000	2,417,000
Ag Information & Library Services	19,465,000	--	--
	360,416,000	253,626,000	53,395,000

The research activities and the distribution by basic, applied and developmental have not varied over the past 10 years.

PEAS AND LENTILS RESEARCH

Question. Please describe your research effort in peas and lentils research.

Answer. ARS conducts research on genetic improvement of peas and lentils with these efforts concentrated at Pullman and Prosser, Washington. Programs at other locations focus on problems of production and post-harvest issues.

Question. By laboratory, what funds were obligated in 1995; what is your current estimate?

Answer. The funding for peas and lentils for FY 1995 and 1996 is provided for the record.

Location	FY 1995 Obligations	FY 1996 Funds
Albany, CA	\$163,957	\$145,000
Beltsville, MD	73,538	--
Corvallis, OR	81,856	--
Prosser, WA	203,575	187,900
Pullman, WA	566,149	523,400
Headquarters	--	64,600
Total	1,089,075	920,900

Question. How many scientists are involved in Federal/State research in peas and lentils research?

Answer. The staff for peas and lentils is 3.1 scientist years.

Question. Does ARS execute cooperative agreement for this research? Explain with whom and how much?

Answer. In 1995, ARS executed a specific cooperative agreement with Ireland on the *Mycosphaerella* blight fungus of peas. The purpose of this agreement was to evaluate U.S. Plant Introduction accessions of peas where the disease is severe in Ireland. In 1995, a specific cooperative agreement was executed with the Washington State University in Mount Vernon, Washington, to evaluate resistance to the pea cyst nematode in field conditions where the nematode naturally occurs.

GRAPE RESEARCH

Question. Please describe your grape research program including your efforts in disease research areas of grape phylloxera and grape virology.

Answer. The ARS grape research program involves efforts to enhance grape germplasm including development of methods to control pests and diseases. Activities include maintenance of a National Clonal Repository for grape germplasm, acquisition, evaluation and distribution of grape germplasm, development of quarantine and postharvest strategies to control arthropod pests, genetic improvement of grape scions and rootstocks, development of alternatives to soil fumigation with methyl bromide, and development of improved cultural practices to improve quality, production efficiency, and pest control.

Grape phylloxera research is conducted on the cause of the death of newly planted phylloxera-resistant rootstocks in young replanted vineyards. This work is focused on the role of grapevine viruses and water mold fungi. Grape rootstocks with resistance to phylloxera and other soilborne pests are being developed by conventional breeding and evaluated. Using biotechnology, new genes providing resistance to soilborne pests are also being introduced into grapes.

Grape virology research involves identifying the causal agents, describing disease spread, and devising control methods for viruses and graft-transmissible pathogens affecting grapevines. This research effort also includes developing specific assays for the rapid detection and identification of the pathogens. Sensitivities of various commercial grape rootstocks to viruses and graft-transmitted pathogens are being investigated.

Question. Where is the research implemented?

Answer. This research is implemented at Geneva, New York; Fresno, and Davis, California; and Poplarville, Mississippi.

Question. Provide actual obligations and staffing for 1995 actual.

Answer. Actual obligations and staffing for FY 1995 for all grape research was \$2,331,705 supporting 6.4 SY's. This included research on grape phylloxera at \$248,777 with .5 SY and grape virology at \$244,493 with .6 SY.

Question. Provide funding and staffing for 1996 current and 1997 estimated for research on grapes.

Answer. Funding in FY 1996 and projected for FY 1997 is \$2,669,800 supporting 7.5 scientists.

HOPS RESEARCH

Question. Please describe your research on Hops.

Answer. Hops research in ARS includes breeding and genetics in the development of new varieties with improved flavor characteristics. In addition, breeding for pest and disease resistance is an important component in the program. ARS also maintains a collection of foreign and domestic hop varieties and breeding germplasm used in the research program.

Question. Whom does ARS cooperate with in this program?

Answer. ARS cooperates with scientists at Washington State University at Prosser and with the University of Idaho in Moscow. Oregon, Washington, and Idaho are the three hop producing states.

Question. Please provide your actual obligations and staffing for 1995.

Answer. Actual obligations in FY 1995 for Hops research was \$390,771. The project was supported by 1.1 scientist years.

Question. By location, provide funding and staffing for 1996 current and 1997 estimated for Hops research.

Answer. ARS Hops research is conducted in Corvallis, Oregon. Funding for fiscal year 1996 is \$392,200 with 1.1 scientist years of support. The same funding and scientist year allocation is projected for fiscal year 1997.

Question. What are your recent accomplishments?

Answer. Recent research accomplishments include the release of a breeding line of an aroma hop of the Hallertauer type. In addition to breeding and evaluation for improved characteristics in domestically bred hops, foreign bred hops have been introduced and evaluated. Over 80% of all currently grown U.S. hops involved USDA research activity.

COOPERATIVE RESEARCH - MISSISSIPPI

Question. Describe the programs jointly carried out between ARS and Mississippi State University and the funding involved for FYs 1996 and 1997.

Answer. The programs in the form of specific cooperative agreements jointly carried out between the designated ARS locations and Mississippi State University, and the estimated FY 1996 and FY 1997 funding levels for these programs, are as follows:

Stoneville, MS

- o Development of production systems for enhanced profitability of soybeans in the Mid South - \$98,000 (est)
- o Kenaf in Mississippi - \$422,300 (est).
- o Herbicide interactions with soil humic materials - \$15,000 (est).
- o Production efficiency in aquaculture - \$377,600 (est).

College Station, TX

- o Catfish food safety - \$322,900 (est).

Poplarville, MS

- o Small fruit germplasm - \$20,000 (est).

Mississippi State (Starkville), MS

- o Development of the Gossym-Comax decision support system for cotton production - \$112,000 (est).

Oxford, MS

- o Development and enhancement of agronomic upland erosion control practices and systems - \$71,100 (est).

Question. What accomplishments have been generated from these research initiatives?

Answer. The research to improve the production efficiency of aquaculture demonstrated that neither polyculture of channel catfish with silver carp, nor reduced supplemental phosphorus in feed will improve water quality. However, both laboratory tests and pond trials confirm that the herbicide, diuron, inhibits the growth of several species of phytoplankton, including the blue-green algae responsible for many off-flavor problems was inhibited by 80 percent. Cooperative work on food safety demonstrated that one to two percent lactic acid, used as a dip, is an effective antimicrobial agent. This work also led to the development of a method, based on high performance liquid chromatography, for detecting oxytetracycline residues in catfish muscle.

The kenaf research has encouraged expansion of crop acreage from 100 acres in 1990 to about 2,500 acres in 1996. Product development work has promoted markets in the paper industry and demonstrated the potential for using kenaf in oil-spill remediation and as a forage. The cooperative work on innovative soil management practices for producing row crops has shown that no-tillage produces higher crop yields, larger profits, and better protection of the environment than conventional tillage for Mississippi's fragile upland soils.

A new formulation has been developed to protect laboratory-reared nematodes, that normally will not survive in the field, and provide them 24 hours during which they can infect bollworm larvae with a lethal bacterium thereby reducing crop damage. Cooperative work on crop simulation has provided growers and consultants with new and improved software for GOSSYM-COMAX, the ARS cotton production model, and added a cotton insect decision support feature that provides users with an interpretation of the cotton insect scouting information for 13 insect pest species.

Question. Describe the programs jointly carried out between ARS and University of Mississippi and the funding involved for FYs 1996 and 1997.

Answer. The programs in the form of specific cooperative agreements carried out jointly between the designated ARS locations and the University of Mississippi, and the estimated FY 1996 and FY 1997 funding levels for these programs, are as follows:

Stoneville, MS

- o Acoustic detection of insects in field crops - \$132,400 (est).

Oxford, MS

- o Numerical modeling of soil erosion and transport processes to support DEC project - \$850,700 (est).
- o Improve acoustic technology for soil/water resource management - \$456,100 (est).
- o Effect of grass strips and conversion of CRP lands on soil loss - \$31,000 (est).

Question. What accomplishments have been generated from these research initiatives?

Answer. Substantial progress is being made toward the long-term goal of the cooperative research on soil erosion and sediment transport, namely, the development of an integrated watershed approach to planning resource conservation measures. Results, reported at the 6th Federal Interagency Sedimentation Conference in March 1996, show that the grade control structures have substantially reduced channel degradation. The first technology transfer conference on the management of landscapes incised by active channels will be held at Oxford, Mississippi in May 1997.

The acoustics research has demonstrated the benefits of using rapid, inexpensive, and non-invasive techniques for monitoring and characterizing critical soil and water properties. Application of these innovative monitoring procedures will provide new insights into the mechanisms that determine the efficiency and effectiveness of resource conservation programs.

ARS maintains ARS research locations in Mississippi at Stoneville, Starkville, Oxford, and Poplarville, Mississippi.

Question. What are the programs and funding carried out at each location for FYs 1996 and 1997?

Answer. The programs and funding at each location are listed below:

Stoneville, Mississippi - The research programs at Stoneville, Mississippi are broad in scope and content. They include: the development of soybean genotypes and management systems that are specific to the early season and stress environments of the southern production area, including host resistant germplasm to manage soybean cyst nematodes; improved surveillance and pest control strategies for areawide management of cotton insect pests, and biological and genetic strategies for controlling the insect pests of soybeans, cotton, and pecans; the biochemical genetics of fiber quality, including identification of genetic-physiological parameters that enhance fiber quality, and the application of this knowledge to the improvement of cotton varieties; the agronomic and economic evaluation of kenaf as a field crop in Mississippi; the development of sustainable weed management strategies for cotton, soybeans and other crops, including assessment of the ecological and environmental benefits of reduced herbicide use, and the replacement of herbicides and methyl bromide by microbiological agents; the development and implementation of new technologies in cotton ginning that will maintain or enhance fiber quality; the breeding, genetics, and endocrinology of catfish; and the development of innovative technologies for more efficient pesticide applications in field crops.

Mississippi State (Starkville), Mississippi - The research programs at Starkville, Mississippi include: the development of integrated pest management strategies including the modification of insect behavior through olfactory chemicals; the development of insect, disease and nematode resistant varieties of corn for the south; the modification and management of forage legume traits that enhance beef and dairy cattle production; the etiology and control of clover diseases caused by fungi, nematodes, and viruses; germplasm and genetic enhancement in cotton, including host plant resistance to insects, diseases, and nematodes; the development of decision support systems for cotton production and cotton pest management; and nutritional and environmental management strategies, including the diagnosis and control of mycoplasmosis, to improve the quality and production efficiency of poultry.

Oxford, Mississippi - The research programs at Oxford, Mississippi include: development of watershed scale evaluation and resource conservation and management strategies for controlling soil loss and sedimentation problems resulting from landscape erosion and stream channel degradation; the development of farming systems that will maintain or enhance water quality and ecology in the Mississippi Delta; and field evaluation of the reliability, performance, and environmental benefits of ecosystem modifications, including the use of reconstructed wetlands and vegetative channel protection measures, for restoring stream corridors and improving the aquatic environment in upland streams of the Yazoo River Basin.

Poplarville, Mississippi - Research at Poplarville include: the breeding and cultural evaluation of new and improved small fruits for the Gulf Coast region including cultivars of strawberry, blackberry, highbush blueberries and muscadine grapes; the development of new and improved small fruit management practices to increase yields, minimize production losses, improve fruit quality and conserve natural resources; determine factors that regulate flowering, fruiting, dormancy, yield, cold hardiness, and tolerance to other environmental stresses; determine optimum planting systems, irrigation and cultural systems adapted to the Gulf States region. Determine the chemical and physical properties, nutritive value and quality of muscadine pomace and develop methods for utilization of products of pomace by the food industry.

FUNDING BY ARS LOCATION IN MISSISSIPPI

Location	FY 1996	FY 1997
	(Dollars in Thousands)	
Stoneville, MS	12,703	13,288
Mississippi State (Starkville), MS	6,303	6,303
Oxford, MS	5,273	5,273
Poplarville, MS	791	791

Question. Identify recent accomplishments resulting from these research programs.

Answer. The broad scope of the recent accomplishments resulting from the research programs at these ARS locations in Mississippi reflects the diversity of the work and disciplinary strengths of the research teams. Recent accomplishment by location are as follows:

Stoneville, Mississippi - A computerized process control system has been developed by the cotton ginning research unit that automatically measures cotton quality at various stages of the ginning process, and automatically selects and routes the cotton through the optimum machine sequence. Several patents have been awarded for this work, and farmer profits should increase by \$10 to \$20 per bale with a potential impact of \$400 million annually. A device to measure the moisture content of cotton during the ginning process inexpensively and accurately was developed, and is being field tested at a commercial gin. The combined economic benefits associated with savings in undamaged fiber weight, and cost reductions at the Classing Office are projected to be \$85 million annually. New high-strength cottons, based on ARS cotton genetics research, have created opportunities for new products. This fiber is capable of withstanding new processing and finishing techniques which result in wrinkle-resistant 100 percent cotton fabrics. The global market for these new products is expanding rapidly, providing substantial support for the price of cotton and stability for the cotton production system. In part because of these developments, the U.S. exported about 9,000,000 bales of cotton in the 1994-5 crop year.

The soybean research program has developed 17 enhanced soybean germplasm lines having resistance to major diseases, insects, and nematodes affecting soybean production in the south. Seeds from these new lines are being made available to commercial soybean breeders for their varietal improvement programs. In the last several years, the Cotton Physiology and Genetics Research Unit has released one cotton variety, MD51ne. This variety is smooth-leaf, has the highest fiber strength of any Midsouth-Southeast variety, is resistant to many major insects, and has yields competitive with popular varieties. Most recently, the Cotton Physiology and Genetics Research Unit has released eight germplasm lines that have all combinations of smooth-leaf, nectariless, and the sub-okra leaf trait. These traits result in improved fiber quality, insect resistance, yield and early maturity. Cotton Physiology and Genetics has discovered that cotton yields can be increased by growing okra-leaf cottons in narrow rows (20-30"). Other research has identified some of the agronomic and biochemical factors that are related to improved fiber quality. The improvements in fiber quality have allowed USA cotton to capture major portions of the USA and foreign textile markets.

Catfish genetics research has made progress, through selective mating, in developing lines with higher growth rates and greater ESC resistance. DNA-based technology was developed for identifying strains, families, and individual catfish. This technology is needed to maintain and assure strain integrity in the commercialization and sale of future stocks, since strains of catfish are difficult to distinguish visually.

Insect pest management research has resulted in successful demonstration of the area-wide management program for *Heliothis*/*Helicoverpa* using insect pathogenic viruses applied to non-crop plants in early season. Viral pathogens have also been demonstrated to have control potential for the beet armyworm which periodically causes major losses in cotton. The persistence and effectiveness of these viruses have been improved by the development and testing of new formulations. Studies on other insect pests have resulted in improved methods for sampling and controlling the tarnished plant bug and aphids in cotton, and stinkbugs in pecans. Monitoring studies have documented widespread pyrethroid resistance in plant bugs in the Mississippi Delta and management recommendations have been altered to avoid early season application of these materials to avoid increasing this problem.

Mississippi State (Starkville), Mississippi - The corn host resistance program led to the development and release of four germplasm lines with resistance to the root-knot nematode, and identified germplasm lines with genetic resistance to *Aspergillus flavus* infection and aflatoxin accumulation. The forage program developed the first alfalfa with resistance to *Sclerotinia* crown and stem rot. This germplasm retains 80 percent of its yield when exposed to severe natural field infections in contrast to adapted commercial cultivars which retain only 30 to 40 percent of their potential yield. The cotton host plant resistance program played a major role, in cooperation with four companies, in the development of the first widely available cultivars of cotton with the Bollgard gene which confers resistance to cotton bollworm, tobacco budworm, and pink bollworm. The same program also developed a linkage map of molecular markers in cotton, and will assess the role of these markers in determining agronomic, fiber, and pest resistance traits in cotton. The integrated pest management program has shown that, under favorable conditions, in the southeastern states, area-wide deployment of the boll weevil bait stick, invented and patented by the research team, is as effective as multiple aerial applications of insecticides, and prevents outbreaks of secondary pests that can be stimulated by aerial applications. Insect mass propagation technology for boll weevils and other important cotton insect pests has been developed. This technology serves as the basis for new and developing methods used to mass produce natural enemies for biological control of cotton pests, reducing the need for chemical pesticides in some areas.

Oxford, Mississippi - The Oxford program has made substantial contributions to the development of technologies for controlling landscape erosion and stabilizing stream channels. Economically feasible, cultural and management practices have been developed and tested for use on highly erodible upland loss soils. Research on aquatic ecology has shown that bio-aquatic habitat is substantially improved by stream corridor restoration. Significant examples of the contributions of the National Sedimentation Laboratory are reported in the proceedings of the Sixth Federal Interagency Sedimentation Conference, the soon-to-be published interagency stream corridor restoration handbook, and in the textbook on "River Restoration," which will be published by John Wiley Publishing Company in September 1996.

Poplarville, Mississippi - In cooperation with Mississippi State University, three new blueberry cultivars were released in 1995. These cultivars exhibit greater freeze tolerance yet ripen earlier than presently grown cultivars. Grower interest is extremely high because they all produced a good fruit crop in 1996, while all presently grown cultivars were severely damaged by the March freeze. As a result of cooperative research with Louisiana State University, a new strawberry cultivar will be released in 1996, which is resistant to anthracnose, the most destructive strawberry disease in the southeast.

Question. Are any changes being proposed or contemplated in the programs carried out at these locations? If so, please provide an explanation.

Answer. There are no proposed or contemplated changes in the programs carried out at these locations. ARS plans to continue the current research conducted at these locations.

ALCORN STATE UNIVERSITY

Question. For fiscal year 1996, the Committee provided \$167,000 of the \$200,000 requested by ARS to establish a Center of Excellence at Alcorn State University. Please provide us with a status report on the establishment of that Center and the activities funded.

Answer. The program being established for the Center of Excellence at Alcorn State University will lead to the establishment of a swine production system capable of producing feeder or market weight, meat-type pigs for rural communities. The specific objectives of the program are to: identify the breeds or strains of swine that are best suited for environmental conditions in the Mid South, evaluate reproductive performances and practices (including artificial insemination) to ensure suitable levels of fertility and litter size; and develop diets and feeding systems for all stages of the life cycle of the pig that maximize feed efficiency and growth rate.

COTTON RESEARCH

Question. Describe by location the pre- and post-harvest cotton research initiatives.

Answer. Cotton research initiatives in ARS, by location, are as follows:

Auburn, AL: Managing wheeled traffic to avoid soil compaction in cotton production systems.

Phoenix, AZ: Management of the sweetpotato whitefly, including the basic genetics and ecology of the insect; development of economic thresholds for control action; on-farm integrated pest management; reduction of lint stickiness in infested cotton; and host plant resistance to whiteflies. Also, integrated management for suppression of the pink bollworm, and breeding and genetics of extra-long staple (American Pima) cotton.

Tucson, AZ: The role of honeybees in crop pollination.

Albany, CA: Cost-effective means of rearing biological control agents for cotton pests.

Fresno, CA: More efficient ways to manage irrigation of cotton, especially drip irrigation systems; crop management in the irrigated desert.

Shafter, CA: Integrated systems for managing cotton production in the San Joaquin Valley, including crop production efficiency, pests and diseases, computer modeling of the crop, and improved equipment for production and harvesting.

Fort Collins, CO: Storage and maintenance of the nation's germplasm collection.

Gainesville, FL: Ecology and behavior of insect pests; modification of insect behavior through manipulation of insect semiochemicals.

Athens, GA: New means of fiber processing.

Tifton, GA: Production systems for the Southeast, emphasizing management of nematodes, weeds, and insect pests with reduced use of nematicides and other pesticides.

New Orleans, LA: New instrumentation for cotton fiber quality evaluation; new processes for adding value to fiber and to textiles; molecular, biochemical, and ecological analysis of cotton fiber quality factors; and new products from cotton. Also, elimination of formation of aflatoxins in cottonseed; and improved processing and products from cottonseed.

Beltsville, MD (Headquarters): Area-wide integrated management of insect pests; demonstration trials of biocompetitive strains of *Aspergillus flavus* to reduce aflatoxin contamination of cottonseed.

Beltsville, MD (Research Laboratories): Responses of cotton to global climate change; innovative means of controlling weeds through biological control; biochemistry and physiology of insect pests.

Columbia, MO: More efficient and effective propagation of insects for biocontrol of cotton pests.

Mississippi State, MS: Breeding cotton for resistance to pathogens, nematodes, and insects; integrated management of insect pests; and development and transfer to users of a computer model of the cotton crop production system.

Oxford, MS: Farming systems that decrease soil erosion and improve water quality in the Mississippi Delta region.

Stoneville, MS: Breeding for fiber quality and resistance to insect pests; improved crop management with environmentally acceptable production practices; operation of the National Cotton Variety Testing Program; technology for mass rearing of beneficial insects; biological control and other management strategies for insect pests; technology for area-wide control of pests; development of sustainable alternatives to herbicides for weed management in cotton, emphasizing biocontrol; means to keep herbicides from contaminating waters; development and implementation of new ginning technology; and more efficient and effective technology for application of pesticides to the crop.

Fargo, ND: Basic genetics, physiology and molecular biology of insect pests.

Las Cruces, NM: Gin plant design and operation to retain fiber quality and spinnability of cottons from the West.

Wyndmoor, PA: New value-added industrial products and biodiesel fuel from seed oils and tallow.

Clemson, SC: Instrumentation systems for improved cotton grading; evaluation of cotton spinning performance and end use quality; and solving chemical and bacteriological problems in cotton fiber quality and processing.

Florence, SC: Developing germplasm and soil, crop, and irrigation management practices suitable for Southeastern cotton production systems.

College Station, TX: Maintenance of the working germplasm collection for cotton; genome mapping for improved cotton breeding; development and testing of area-wide strategies for managing important insect pests of cotton; improved aerial application technology for pesticides; and basic and applied research to control pathogens of cotton.

Lubbock, TX: New principles and new technology for efficient irrigation of cotton and other crops; improving plant productivity under stress conditions (unfavorable environments) in High Plains production systems; and improved harvesting and ginning technologies for stripper-harvested cottons.

Temple, TX: Sustainable production systems to minimize soil erosion in clay soils.

Weslaco, TX: Insect pest suppression through area-wide integrated pest management; development of biological control systems; conservation tillage practices for cotton; remote sensing capability for resource assessment; and breeding pest-resistant cottons.

Montpellier, France: Collection and evaluation of candidate biological control organisms from Eurasia for control of insect pests, weeds, and pathogens.

Question. For your overall cotton research program, provide funding and staffing by project.

Answer. Funding and staffing for the overall cotton research program are as follows:

PROJECT TITLE	FY 1996	
	FUNDS	SCIENTISTS
COTTON:		
IMPROVING TILLAGE AND TRACTION SYSTEMS	\$ 130,800	0.6
MANAGING TRAFFIC AND TILLAGE TOOL INDUCED COMPACTION FOR BEST CROP RESPONSE	220,900	0.4
MANAGEMENT SYSTEMS TO AMELIORATE STRESS, IMPROVE PRODUCTIVITY, AND PROVIDE A SAFE ENVIRONMENT	60,900	0.3
SUPPRESS PINK BOLLWORM POPULATIONS WITH STEINERNEMA RIOBRAVIS CARPOCAPSAE	124,100	--
COTTON PLANT PHYSIOLOGY, GENETICS, AND PLANT INSECT INTERACTIONS	1,290,400	5.0
BIOLOGY, ECOLOGY, SAMPLING AND CONTROL OF WHITEFLIES	1,505,700	5.2
INTEGRATED PEST MANAGEMENT STRATEGIES FOR COTTON INSECT CONTROL	1,215,200	3.5
IMPROVEMENT OF BEE POLLINATION OF CROPS AND ECOLOGICALLY IMPORTANT PLANTS	121,700	0.6
EXTRUSION PROCESSING OF INSECT DIETS FOR BIOLOGICAL CONTROL PROGRAMS	114,500	0.4
IRRIGATION WATER AND CROP MANAGEMENT TO SUSTAIN PRODUCTIVITY AND PROTECT WATER QUALITY	92,800	0.3
IRRIGATED DESERT RESEARCH - II	48,600	--
WESTERN INTEGRATED CROPPING SYSTEMS RESEARCH	1,165,800	4.0
CHEMICAL AND BIOCHEMICAL MODIFIERS OF INSECT BEHAVIOR AND PHYSIOLOGY	197,700	0.7
BEHAVIORAL ECOLOGY AND MANAGEMENT OF CROP INSECT PESTS WITH SEMIOCHEMICALS	156,700	0.2
INSECT BIOLOGICALLY-BASED CONTROL THROUGH BEHAVIOR MODIFICATION	219,900	1.0
MANIPULATION OF THE GENETICS AND DEVELOPMENT OF AGRICULTURALLY IMPORTANT PEST/BENEFICIAL INSECTS	229,000	1.2
EUROPEAN BASED RESEARCH ON BIOLOGICAL CONTROL OF SWEETPOTATO WHITEFLY	90,300	0.4
ENHANCING VALUE OF AGRICULTURAL PRODUCTS THROUGH USE OF MICROORGANISMS	34,700	0.2
MANAGEMENT OF NEMATODES TO REDUCE CROP LOSS AND NEMATOCIDE USE ON IRRIGATED CROPS OF THE SOUTHEAST	38,600	0.1
BIOLOGY, ECOLOGY, AND APPLICATION OF NATURAL ENEMIES OF FIELD CROP INSECT PESTS	56,500	0.2
DEVELOPMENT OF INNOVATIVE PEST CONTROL STRATEGIES WITH BIOLOGICAL AND CHEMICAL CONTROL AGENTS	117,400	0.5
WEED ECOLOGY, MGMT. APPLICATION TECH. & GROUND- WATER QUALITY ON IRRIGATED COASTAL PLAIN CROPS	82,100	0.3

PROJECT TITLE	FY 1996	
	FUNDS	SCIENTISTS
GENETIC APPROACHES FOR MANAGING THE CORN EARWORM HELICOVERPA ZEA AND THE FAW SPODOPTERA FURGIPERDA	27,600	0.1
FALL ARMYWORM: AUGMENTATION POTENTIAL OF N. GUYANENSE TO INHIBIT MIGRATION OVERWINTERING HABT.	154,600	0.5
STRATEGIES FOR IMPROVING COTTON FIBER QUALITY	301,900	1.0
NATURE AND CAUSES OF MOTES AND UNDEVELOPED COTTON FIBERS, AS RELATED TO DYEING IMPERFECTIONS	947,600	4.4
COTTON WITH IMPROVED WEAR AND RESILIENCY BY FACILE POLYMERIZATION REACTIONS	774,700	2.0
NONWOVEN TEXTILES FROM COTTON AND OTHER NATURAL FIBERS	527,400	1.3
BIOCHEMICAL MODIFICATION OF COTTON TEXTILES FOR ENHANCED PERFORMANCE	918,300	2.2
TREATMENTS FOR DELAYED CURE APPLICATIONS FOR COTTON FABRICS	710,900	3.0
DEVELOP TECHNOLOGY FOR PRODUCING IMPROVED AND ECOLOGICALLY FRIENDLY COTTON-RICH TEXTILES	756,900	2.4
IMPROVED DURABLE PRESS COTTONS VIA A MULTIFACETED APPROACH	936,600	3.0
PROCESSING PERFORMANCE OF COTTON	883,000	2.0
DEVELOPMENT OF IMPROVED INSTRUMENTATION TO MEASURE COTTON MATURITY AND FINENESS	387,300	1.4
ADVANCED INSTRUMENTATION FOR FIBER PROPERTY ANALYSIS	447,800	2.6
STRUCTURAL AND MORPHOLOGICAL CHARACTERISTICS OF THE COTTON FIBER AND THEIR RELATION TO PERFORMANCE	410,000	2.0
AREA-WIDE MANAGEMENT OF AGRICULTURAL PESTS	1,800	--
RESPONSE MECHANISM OF PLANTS TO DROUGHT AND MINERAL STRESSES	77,500	0.1
AMELIORATION OF ACUTE ENVIRONMENTAL STRESS THRU ADAPTATION TO ATMOSPHERIC AND EDAPHIC CONDITIONS	171,500	0.6
DEVELOPMENT OF BIOCONTROL AGENTS FOR ANNUAL WEEDS OF ANNUAL CROPS USING BACTERIAL TOXINS	94,600	0.4
MANIPULATION OF INSECT REPRODUCTION, DIAPAUSE AND DEVELOPMENT FOR CONTROL OF PEST SPECIES	181,800	0.7
GERMPLASM ENHANCEMENT IN COTTON WITH THE PRIMITIVE RACE STOCKS OF GOSSYPIUM HIRSUTUM	246,700	1.0
GENETIC ENHANCEMENT FOR RESISTANCE TO INSECTS AND NEMATODES IN COTTON	544,700	1.1
DEVELOPMENT OF MODEL-BASED DECISION SUPPORT SYSTEMS FOR COTTON PRODUCTION MANAGEMENT	831,300	3.0
MODIFICATION OF INSECT BEHAVIOR THROUGH OLFACTORY CHEMICALS	220,700	1.4
BIOCHEMISTRY AND GENETICS OF HOST PLANT RESISTANCE TO INSECTS, DISEASES, AND NEMATODES	192,000	1.0
DEVELOPMENT OF INTEGRATED CONTROL PROCEDURES	1,113,400	4.4
INTEGRATED COMPUTER-BASED DECISION AID FOR COTTON PEST MANAGEMENT	433,100	3.0
FARMING SYSTEMS FOR IMPROVED WATER QUALITY/ECOLOGY FOR A MISSISSIPPI DELTA MSEA	49,700	0.1
IMPROVED EROSION CONTROL FOR UPLAND AREAS AND REDUCED SEDIMENT PRODUCTION IN DEC WATERSHEDS	102,100	0.3
REDUCE HERBICIDE CONTAMINATION OF SURFACE WATER BY USING ALTERNATIVE MANAGEMENT SYSTEMS/COTTON PROD.	16,600	--

PROJECT TITLE	FY 1996	
	FUNDS	SCIENTISTS
DEVELOPMENT OF MASS PROPAGATION TECHNOLOGY FOR BENEFICIAL AND PEST INSECTS	451,000	1.2
DEVELOPMENT OF EFFICIENT FIELD CROP PRODUCTION SYSTEMS	231,700	0.8
BIOCHEMICAL GENETICS OF FIBER QUALITY AND ITS APPLICATION TO THE IMPROVEMENT OF COTTON VARIETIES	133,700	1.0
ENVIRONMENTALLY ACCEPTABLE COTTON PRODUCTION SYSTEMS FOR PEST CONTROL, YIELD AND QUALITY	463,800	2.1
NATIONAL COTTON VARIETY TEST PROGRAM	463,600	0.2
GENETIC-PHYSIOLOGICAL PARAMETERS THAT ENHANCE FIBER QUALITY	500,900	1.6
DEVELOP INNOVATIVE TECHNOLOGY FOR MORE EFFICIENT PESTICIDE APPLICATION IN FIELD CROPS	653,800	2.6
CONTROL STRATEGIES FOR HELIOTHIS/HELICOVERPA SPP. & OTHER FIELD CROP INSECTS IN COTTON AGROECOSYSTEM	1,036,400	3.0
SOIL QUALITY OF SUSTAINABLE AGRICULTURAL SYSTEMS & IMPACTS ON HERBICIDE & ALTERNATIVE WEED MGMT SYSTE	259,000	1.0
BIOLOGICAL AND GENETIC CONTROL OF CROP PESTS EMPHASIZING HELIOTHIS	421,300	0.9
BIOCHEMICAL GENETIC AND ECOLOGICAL EFFECTS OF NATURAL AND SYNTHETIC HERBICIDES	138,800	0.5
DEVELOP SUSTAINABLE INTEGRATED WEED MANAGEMENT SYSTEMS FOR COTTON SOYBEANS AND OTHER CROPS	135,500	0.3
REPLACEMENT OF HERBICIDES AND METHYL BROMIDE BY MICROBIOLOGICAL CONTROL OF WEEDS	138,800	0.6
AREAWIDE MGMTNT OF COTTON INSECT PESTS IN MIDSOUTH DEV OF IMPROVED SURVEILLANCE & PEST MGMTNT TECHNOL	685,300	3.0
COTTON GINNING RESEARCH TO MAINTAIN AND ENHANCE FIBER QUALITY	600,100	2.6
DEVELOPMENT AND IMPLEMENTATION OF NEW TECHNOLOGIES IN COTTON GINNING	609,800	2.5
DEVELOPMENTAL AND GENETIC FACTORS USEFUL TO THE PROPAGATION OF BENEFICIAL INSECTS FOR BIOCONTROL	244,700	0.8
GIN PLANT DESIGN, CONTROL AND AUTOMATION TO RETAIN FIBER QUALITY AND SPINNABILITY OF WESTERN COTTONS	971,800	2.7
BIOCHEMICAL AND MOLECULAR APPROACHES TO THE DEVELOPMENT OF ARTIFICIAL REARING DIETS AND DNA PROBE..	443,500	1.5
THE GENETICS OF NATURAL INSECT POPULATIONS AND MODERN METHODS	86,500	0.3
GENES CONTROLLING INSECT DEVELOPMENT AND REPRODUCTION AND METHODS FOR INSECT GENETIC TRANSFORMATION	534,400	0.7
ELIMINATION OF ENVIRONMENTAL AND WATER SAFETY HAZARDS CAUSED BY CONTAMINANTS IN COMMERCL. COTTON	671,500	1.0
COTTON FIBER PROPERTIES AFFECTING PROCESSING AND END USE QUALITY	499,700	2.4
IMPROVED INSTRUMENT SYSTEMS FOR USE IN COTTON MARKETING	416,000	2.1
PILOT SPINNING LABORATORY EVALUATION OF THE FIBER QUALITY AND PROCESSING PERFORMANCE OF COTTON	614,500	0.5
SOIL/CROP MGMT. SYSTEMS FOR ENVIRONMENTALLY SOUND, RESOURCE-SUSTAINABLE, SE COASTAL PLAIN AGRICULTURE	110,200	0.4
WATER MGMT. FOR IMPROVED ENVIRONMENTAL QUALITY AND SUSTAINABLE PRODUCTIVITY IN EASTERN COASTAL PLAIN	241,000	1.0
PROFITABLE COTTON PRODUCTION SYSTEMS FOR THE SOUTHEAST WITH IMPROVED YIELD AND QUALITY	381,200	1.6

PROJECT TITLE	FY 1996	
	FUNDS	SCIENTISTS
EFFECTS OF MIGRATORY ACTIVITY ON POPULATION DYNAMICS OF CORN EARWORM	38,600	--
COTTON GERMPLASM EVALUATION AND GENOME MAPPING	393,900	0.7
ACQUISITION, EVALUATION, MAINTENANCE AND SYSTEMIZATION OF COTTON GERMPLASM	417,000	1.2
IDENTIFY AND DEVELOP ALTERNATIVE STRATEGIES FOR CONTROL OF NEMATODE PARASITES ON COTTON AND KENAF	343,100	1.2
DEVELOP NONCHEMICAL STRATEGIES FOR CONTROL OF COTTON DISEASES	989,400	3.6
AERIAL APPLICATION TECHNOLOGY FOR CROP PROTECTION	436,900	1.7
DEVELOPMENT OF AREA-WIDE MANAGEMENT STRATEGIES FOR ADULT CORN EARWORM AND OTHER CROP INSECT PESTS	269,000	1.1
MANAGING STRESS FOR IMPROVED WATER USE EFFICIENCY IN SEMI-ARID CROP PRODUCTION	131,600	0.6
IMPROVING PLANT PERFORMANCE IN ADVERSE ENVIRONMENT	373,300	0.8
COTTON ROOT SYSTEMS: GENETIC DIVERSITY AND RESPONSE TO ENVIRONMENTAL STRESS	192,500	1.0
DEVELOPMENT OF COTTON GERMPLASM WITH TOLERANCE TO WATER AND THERMAL STRESS	152,300	0.7
CHARACTERIZING PLANT RESPONSES TO THERMAL STRESS AND THEIR METABOLIC AND MOLECULAR BASIS	200,200	0.7
HARVESTING AND GINNING TECHNOLOGIES FOR STRIPPER COTTON	681,200	3.5
SUSTAINABLE AGRICULTURAL PRODUCTION SYSTEMS FOR CLAY SOILS	63,500	0.3
BIOLOGICAL CONTROL OF BOLL WEEVIL BY PROPAGATION AND RELEASE OF THE PARASITE, C. GRANDIS	193,100	--
REMOTE SENSING TECHNOLOGY FOR RESOURCE ASSESSMENT, MONITORING, AND MANAGEMENT	92,900	0.2
INTEGRATED PRODUCTION SYSTEMS	146,900	0.4
MASS PROPAGATION/AUGMENTATION OF WASP PARASITES TO MANAGE WEEVILS, CATERPILLARS AND OTHER PESTS	470,000	0.7
BIOLOGY AND ECOLOGY OF CROP PESTS EMPHASIZING AREA-WIDE SUPPRESSION OF BOLL WEEVIL AND CORN EARWORM	574,200	1.8
SPATIAL INFORMATION TECHNOLOGY AND COMPUTER-AIDED DECISION SUPPORT SYSTEMS FOR FIELD MANAGEMENT	62,000	0.1
TOTAL	38,136,500	129.3
COTTONSEED:		
PRESERVATION OF BASE PLANT GERMPLASM COLLECTION	\$141,700	0.1
THE CONVERSION AND UTILIZATION OF AGRICULTURAL BY-PRODUCTS AS ADSORBENT MATERIAL	109,800	0.3
SEPARATION AND PURIFICATION PROCESSES FOR IMPROVED OIL, MEAL AND BY-PRODUCTS UTILIZATION OF OILSEEDS	810,000	3.0
AFLATOXIN CONTROL THROUGH TARGETING GENE CLUSTER GOVERNING AFLATOXIN SYNTHESIS IN CORN & COTTONSEED	549,600	2.1
MODIFICATION OF FUNGAL COMMUNITY STRUCTURE TO IMPROVE FOOD SAFETY	421,300	1.6
AFLATOXIN CONTROL THROUGH ADDITION OF ENHANCEMENT OF ANTIFUNGAL GENES IN CORN AND COTTON	713,600	3.4
PREHARVEST CONTROL OF AFLATOXIN	221,400	--
GIN PLANT DESIGN, CONTROL AND AUTOMATION TO RETAIN FIBER QUALITY AND SPINNABILITY OF WESTERN COTTONS	108,000	0.3

PROJECT TITLE	FY 1996	
	FUNDS	SCIENTISTS
CONVERSION OF NATURAL GLYCERIDES TO HIGHER VALUED PRODUCTS	216,300	0.8
HARVESTING AND GINNING TECHNOLOGIES FOR STRIPPER COTTON	92,900	0.5
TOTAL	3,384,600	12.1
TOTAL FOR COTTON AND COTTONSEED	41,521,100	141.4

Question. What recent accomplishments have come from the research?

Answer. A few recent accomplishments of ARS cotton research are as follows:

Pink bollworm controlled in Imperial Valley. For many years, the pink bollworm has been a serious pest of cotton in the Southwest deserts. ARS researchers developed and tested a short-season cotton production system for the Imperial Valley of California, which starves the insect at the end of the season but retains good yields. The system was adopted regionally in 1989. In 1994, after 5 years of short-season production, the pink bollworm was no longer economically significant in the region, and no insecticides were needed to kill this pest.

Pima cotton germplasm released. Extra-long staple cotton is a high-quality, high-value cotton grown in the Southwest and California. Until recently, all acreage was planted to varieties developed and released by ARS; now, private seed companies are beginning to breed new varieties. ARS has recently released 10 new lines with improved yield, fiber strength, or other properties, for use by other plant breeders. These lines will be the basis for the next two decades of commercial varieties to be grown by farmers.

Cotton seedlings protected from chilling damage. On the High Plains of West Texas, spring chills often damage or kill cotton plants as they first emerge from the soil. ARS at Lubbock, in cooperation with Texas Tech University, found that planting cotton into a field of recently mowed wheat stubble helps protect the seedlings from chilling damage. The protection appears to involve beneficial fungi that colonize the wheat roots and are then able to move to the cotton roots as they grow. This practice has been adopted on about 1,000,000 acres on the High Plains.

High Volume Instrument (HVI) grading. HVI grading is the cornerstone of ARS' coordinated research program for cotton quality improvement. Developed over a 20 year period and now mandatory for grading U.S. cotton, the system has led to recognition of the superior quality of American cottons, which now earns a premium of 4 cents a pound for the U.S. industry--an extra \$450 million in the crop year 1994-95.

High-strength fiber and other fiber quality improvements. ARS geneticists have released high-strength germplasm, and stimulated development of new "super strength" cottons. ARS ginning engineers have made parallel contributions in reducing damage to the cotton fiber in ginning, which have also improved the fiber. Together, these developments lead to superior processing performance in modern high speed textile plants, and to higher quality, stronger textile fabrics.

CITRUS ROOT WEEVIL

Question. Additional appropriations of \$400,000 were provided to ARS in FY 1996 for Citrus Root Weevil. What is the total funding for Citrus Root Weevil?

Answer. ARS is devoting \$411,400 in fiscal year 1996 on citrus root weevil.

Question. By location and project, describe the research project objective, funding and the scientist effort involved in your Citrus Root Weevil program.

Answer. ARS has one project at its Orlando, Florida, facility devoted to citrus root weevil and other citrus pests. The objective of the ARS program on citrus root weevil is to develop economical and environmentally-sound integrated pest management strategies with emphasis on biological control, host-plant resistance, and fundamental biology and ecology. The funding and scientist effort devoted to this pest project is \$411,400 and 0.9 SYs, respectively.

Question. Were new research initiatives begun in FY 1996 or were these funds used to support existing work? Please explain.

Answer. The funds were used to support new research initiatives in FY 1996, as well as to support existing work. Prior to the addition of the newly appropriated funds, the Subtropical Insects Research Unit in Orlando, Florida, devoted \$11,100 in fiscal year 1995, on this pest for screening resistant citrus germplasm. Additional funding received in the form of grants from the Florida Department of Agriculture and Consumer Services in the amount of \$75,000 were used for mass rearing of citrus root weevil and for nematode biocontrol research. ARS initiated new research in FY 1996 on the biology, phenology, demography and population dynamics of the citrus root weevil, in order to lay the foundation for the development of effective, biologically-based IPM control strategies. The new funds have also allowed for the continuation of our mass rearing program, intensification of our resistant germplasm screening, and finding more effective ways of using known biological control agents.

Question. How are the funds being implemented, i.e., new SY's cooperative agreements, etc.?

Answer. ARS is now devoting 0.9 SY to work on citrus root weevil from the current staff of the Subtropical Insects Research Unit in Orlando, Florida. ARS will initiate a specific cooperative agreement with the University of Florida for FY 1996 in order to help the ARS scientists fill some of the citrus root weevil life circle, behavioral and ecological knowledge gaps. As technologies are developed, ARS will work closely with the University of Florida Extension and commercial pest control companies to help ensure technology transfer to the citrus growers. A number of control strategies are currently being tested by ARS and the University of Florida, and include monitoring for the pest, insecticidal fungi, nematode applications, sanitation procedures, and select chemical insecticides.

SCREWORM RESEARCH

Question. What objectives are currently underway on screwworm research?

Answer. There are seven objectives underway on screwworm research. All of these objectives are aimed at supporting the APHIS screwworm eradication program in Central America and FAO screwworm efforts in the Caribbean region. The ultimate objective is to free Central America and the Caribbean from screwworm so that we can either eliminate or minimize the possibility of reintroduction of screwworm into the U.S. The seven objectives of ARS screwworm research are to develop:

- a vigorous screwworm strain for mass production of sterile flies;
- new methods and validate the existing methods for surveillance, trapping, and monitoring of screwworm in Central America and the Caribbean region;
- an easy to use, color-based Elisa method to distinguish the primary from the secondary screwworm under field conditions;
- genetic fingerprints of feral screwworm populations of Central America and the Caribbean region so that we can trace the source of screwworm reinfestation in eradicated areas;

- improved methods for the study of ecology, biology and population dynamics of screwworm populations in their natural habitats. This includes study of behavior, specially the habitat preferences, and dispersal of sterile and native flies using remote sensing and Geographic Information System technologies;
- economical substitutes for the larval diet and cost effective screwworm rearing technologies. This includes development of male-only strain; and
- cryopreservation methods for long-term storage of screwworm eggs to reduce the cost of continual screwworm rearing during the period of low demand for sterile flies and to increase the production of screwworm on short notice in response to high-demand and emergency periods.

Question. At what locations is the research conducted?

Answer. ARS conducts its screwworm research at four locations. These include Beltsville, Maryland; Lincoln, Nebraska; Fargo, North Dakota; and Panama City, Panama.

Question. Provide resources associated with this research by location.

Answer. The funding associated with screwworm research in fiscal year 1996 is as follows:

<u>Location</u>	<u>FY 1996 Funds</u>
Beltsville, MD	\$61,200
Lincoln, NE	497,400
Fargo, ND	79,300
Panama City, Panama	<u>1,008,200</u>
	1,646,100

Question. What work is carried out cooperatively with APHIS?

Answer. ARS conducts six research projects in cooperation with APHIS. These include:

- development and testing of new vigorous screwworm strains for mass production of sterile flies;
- development of economical substitutes for the larval diet and cost effective screwworm rearing technologies. This also includes development of a male-only strain;
- diagnosis and correction of problems that occur in mass production of screwworm; such as breeding of house fly populations in the mass rearing facility or decline in screwworm pupal weights;
- field testing of new screwworm trapping technologies developed by ARS. This includes the use of remote sensing methods;
- diagnosis of factors contributing to the lingering screwworm infestations in areas under eradication; and
- collection of feral screwworm samples from areas targeted for eradication for genetic fingerprinting.

FOOT-AND-MOUTH DISEASE

Question. Describe your research on Foot-and-Mouth Disease (FMD).

Answer. All ARS research on foot-and-mouth disease is conducted at the Plum Island Animal Disease Center, Greenport, New York. The first goal of the FMD program is to continue development of genetically engineered or altered FMD virus that can be used to make vaccines that in the future would allow production and safe use outside of biocontainment. A second goal is development of diagnostics that can be produced and used outside of biocontainment and which can detect and differentiate vaccinated from infected animals. No such diagnostics currently exist. A third goal is to understand the basic cellular immune response of infected cattle in order to optimize vaccines, diagnostics, and alternative control measures. A fourth goal is to examine why some animals recover from infection but continue to shed virus.

Question. Provide funding and staffing for FYs 1996 and 1997.

Answer. For FY 1996 and 1997, the funding of \$5,220,800 and 4.0 SY to the Plum Island Animal Disease Center (PIADC) located in Greenport, New York, remained static.

Question. How do we cooperate with foreign countries in FMD research?

Answer. The FMD program has always had a high number of international collaborations through cooperative agreements, training programs, participation in international meetings, and on international committees. An example of international collaboration is a newly proposed Brazil/U.S. project which is in the final agreement stages which will enable Brazilian scientists to come to PIADC to work on FMD diagnostics and vaccines. Concurrently, it will give PIADC scientists access to field environments to test new vaccines and diagnostics that have already been tested in the laboratory. This is the only way ARS can validate a new generation of genetically-engineered vaccines as USDA can not test FMD vaccines in the U.S. PIADC provides reagents and ideas and share authorship on publications with many international groups as a result. Scientists contribute to international newsletters and help foster international collaborations. The scientists participate in international workshops such as a recent one sponsored by the European Union held this year. As a result of this interaction, it became evident that the molecular expression systems used by PIADC for a new generation of vaccines is superior to those used in many European institutes. This has resulted in a number of new collaborations.

HAZARDOUS WASTE CLEAN-UP (HWC)

Question. Please list the funds obligated by location for hazardous wastes projects for FY 1995 and planned for FY 1996.

Answer. The funds obligated by location for hazardous wastes projects for FY 1995 and planned for FY 1996 are as follows:

FY 1995

Beltsville, MD	\$4,005,897
Greenport, NY	39,800
East Lansing, MI	20,158
Ames, IA	101,750
Shafter, CA	28,486
Temple, TX	25,000
Weslaco, TX	28,250
Orlando, FL	32,713
Watkinsville, GA	37,202
Brooksville, FL	8,161
Florence, SC	40,390
Dubois, ID	95,811
Prosser, WA	24,961
Fresno, CA	19,125
Boise, ID	<u>18,595</u>
Total	4,526,299

FY 1996

Beltsville, MD	\$2,535,000
Madison, WI	40,000
Ames, IA	130,000
Peoria, IL	100,000
Weslaco, TX	100,000
Savannah, GA	375,000
Greenport, NY	600,000
El Reno, OK	70,000
Mayaguez, PR	12,000
St Croix, VI	50,000
Athens, GA	10,000
Brownwood, TX	<u>73,700</u>
Total	4,095,700

Question. Provide amounts and brief description of each project funded from both agency funds and departmental HWC funds.

Answer. The amounts and brief description of each project funded from both agency funds and departmental HWC funds are as follows:

FY 1995 Agency Funded Projects

Dubois, ID	\$ 95,811	Underground Storage Tanks Removals/Replacements
Prosser, WA	24,961	Underground Storage Tanks Removals/Replacements
Fresno, CA	19,125	Underground Storage Tank Removal
Boise, ID	18,595	Underground Storage Tanks Removals/Replacements
Beltsville, MD	<u>2,194,807</u>	Underground Storage Tanks Removals/Replacements
Total	2,353,299	

FY 1995 HWC Funded Projects

Beltsville, MD	\$1,294,170	Payment for excavation and backfilling of the biodegradable site completed in January 1994.
Beltsville, MD	360,253	Remedial Investigation/Feasibility Study at National Priorities List Sites.
Beltsville, MD	156,667	Underground Storage Tanks Removals/Replacements
Greenport, NY	39,800	Resource Conservation and Recovery Act (RCRA) Site, Closure
East Lansing, MI	20,158	Site Inspection/Sampling
Ames, IA	62,000	Site Inspection/Sampling
Ames, IA	39,750	Underground Storage Tanks Removals/Replacements
Shafter, CA	28,486	Drywell Investigation Health Risk Analysis
Temple, TX	25,000	Sampling/Analysis/Report of Chemical Dump Site
Weslaco, TX	28,250	Sampling/Analysis/Report of Chemical Storage Sheds
Orlando, FL	32,713	Underground Storage Tank Removal/Replacement
Watkinsville, GA	37,202	Soil and groundwater sampling
Brooksville, FL	8,161	Underground Storage Tank Removal/Replacement
Florence, SC	<u>40,390</u>	Soil and groundwater sampling
Total	2,173,000	

FY 1996 Agency Funded Projects

Beltsville, MD	\$1,000,000	Remedial Investigation/ Feasibility Study at National Priorities List Sites
Beltsville, MD	700,000	Removal Actions at National Priorities List Sites
Greenport, NY	600,000	RCRA Site Closure
El Reno, OK	70,000	Environmental Site Assessment Phase II /Sampling
Mayaguez, PR	12,000	Underground Storage Tank Removal/Replacement
St. Croix, VI	50,000	Underground Storage Tank Removal/Replacement
Athens, GA	10,000	Underground Storage Tank Removal/Replacement
Brownwood, TX	<u>73,700</u>	Environmental Site Assessment/ Phases I, II and Remediation
Subtotal	2,515,700	

FY 1996 HWC Funded Projects

Beltsville, MD	\$ 235,000	Underground Storage Tanks Removals/Replacements
Madison, WI	40,000	Underground Storage Tanks/Remedial Actions
Ames, IA	120,000	Underground Storage Tanks/Remedial Actions
Peoria, IL	100,000	Sampling and Remedial Actions
Ames, IA	10,000	Preliminary Assessment/Site Investigation
Weslaco, TX	30,000	Upgrade Pesticide Rinse water Underground Storage Tank
Weslaco, TX	30,000	Investigate Acid Neutralization Tank
Weslaco, TX Station	40,000	Investigate Tractor Rinse
Savannah, GA	375,000	RCRA Sampling and Remedial Actions
Beltsville, MD	<u>600,000</u>	Settlement of Biodegradable Site Contractor Claim
Subtotal	<u>1,580,000</u>	
Total	4,095,700	

ENVIRONMENTAL CLEAN-UP ACTIVITIES

Question. Please provide a listing of ARS locations where environmental clean-up activities are planned.

Answer. A listing of ARS locations where environmental clean-up activities are planned is provided below:

Beltsville, MD
 Delaware, OH
 Greenport, NY
 Shafter, CA
 El Reno, OK
 Peoria, IL
 East Lansing, MI
 Savannah, GA

Question. Describe the nature of the work and the estimated cost for each site.

Answer. A description of the nature of the work and the estimated cost for each planned site are provided below. These are projected FY 1997 projects. The costs have been estimated using FY 1995 cost data and remediation information. The estimated costs are subject to increases/decreases as the project requirements become better defined through investigative/planning activities.

<u>Location</u>	<u>Est. Cost</u>	<u>Nature of Work</u>
Beltsville, MD	\$ 200,000	Underground Storage Tanks Removals/Replacements
Beltsville, MD	200,000	Biodegradable Site
Beltsville, MD	1,360,000	Remedial Investigation/ Feasibility Study at National Priorities List Sites
Beltsville, MD	1,000,000	Removal Actions at National Priority List Sites
Delaware, OH	500,000	Remediate Radiation Burial Site
Greenport, NY	600,000	RCRA Site Closure
Greenport, NY	400,000	Remedial Investigation/ Feasibility Study
Shafter, CA	100,000	Drywell Remediation/Closure Report
El Reno, OK	50,000	Environmental Site Assessment Sampling and Remediation
Peoria, IL	75,000	Investigate/Remediate Contaminated Soil
Peoria, IL	50,000	Underground Storage Tanks Removals/Replacements
East Lansing, MI	100,000	Preliminary Assessment/ Feasibility Study
Savannah, GA	<u>100,000</u>	RCRA Sampling and Remedial Actions
Total	4,735,000	

TRAVEL

Question. Please provide the Committee with a breakdown of your actual travel costs in FY 1995.

Answer. FY 1995 travel costs are as follows:

Common Carrier	\$ 5,414,158
Mileage Allowance Comm. Coord.	467,054
Per Diem Allowance	3,860,566
Actual Subsistence	1,550,033
Transfer of Station	1,207,500
Vehicle Transportation	409,375
Miscellaneous Travel Expenses	<u>258,886</u>
TOTAL	13,167,572

Question. Please identify foreign travel obligations for FYs 1993, 1994, and 1995.

Answer. Foreign travel obligations for FYs 1993, 1994, and 1995 are as follows:

FY 1993	\$1,537,101
FY 1994	\$2,030,978
FY 1995	\$1,654,038

Question. How many ARS personnel were engaged in foreign trips in FYs 1993, 1994, and 1995 and for what purposes?

Answer. The number of employees performing foreign trips is as follows: 1,279 in FY 1993; 1,363 in FY 1994; and 1,226 in FY 1995.

The majority of foreign travel was to present scientific findings at international conferences, collaborate and review research at international organizations, collect germplasm and biological control organisms in foreign countries.

Question. What are your agency's foreign travel plans for FY 1996?

Answer. The foreign travel plans for FY 1996 are 991 employees making 1,226 trips (as of May 7, 1996). The purposes of these trips are similar to those reflected above for trips made during FY 1995.

MANAGEMENT COSTS

Question. How much will ARS expend for Headquarters management costs in FY 1996?

Answer. Projected expenditures for Headquarters management costs in FY 1996 is \$69.8 Million.

Question. Does this correspond to your 10 percent program assessment?

Answer. Yes, this corresponds to the 10 percent program assessment.

Question. Please list your management costs and FTEs by function e.g., Personnel, Contracting, Accounting etc., and location for FY 1995 and estimate FY 1996.

Answer. The FY 1995 management costs and FTEs by function (including administrative and clerical support to the function) are as follows:

Washington, DC Area:

FUNCTION	MANAGEMENT COSTS	FTE
Management	\$34,310,496	249.13
Personnel	7,201,650	156.06
Financial	1,755,386	29.84
Contracts	1,911,486	44.44
Facilities	3,102,685	59.75
Computer	<u>2,994,041</u>	<u>34.41</u>
TOTAL	51,275,744	573.63

Outside Washington, DC, Area:

<u>FUNCTION</u>	<u>MANAGEMENT COSTS</u>	<u>FTE</u>
Management	\$ 4,499,899	51.0
Personnel	838,224	16.0
Financial	3,691,991	52.1
Contracts	5,365,175	99.8
Facilities	1,939,738	38.9
Computer	<u>1,023,601</u>	<u>17.9</u>
TOTAL	16,358,628	275.7

The projected FY 1996 management costs and FTEs by function are as follows:

Washington, DC, Area:

<u>FUNCTION</u>	<u>MANAGEMENT COSTS</u>	<u>FTE</u>
Management	\$36,806,064	250.14
Personnel	7,841,923	150.63
Financial	2,069,577	37.15
Contracts	2,265,562	42.16
Facilities	2,831,847	42.78
Computer	<u>3,088,864</u>	<u>52.77</u>
TOTAL	54,903,837	575.63

Outside Washington, DC, Area:

<u>FUNCTION</u>	<u>MANAGEMENT COSTS</u>	<u>FTE</u>
Management	\$4,033,819	51.0
Personnel	770,116	15.6
Financial	2,473,262	50.1
Contracts	4,929,245	99.9
Facilities	1,782,131	36.1
Computer	<u>940,432</u>	<u>19.1</u>
TOTAL	14,929,005	271.8

Question. What are your projected management costs and FTEs for FY 1997?

Answer. The projected management costs for FY 1997 are the same as FY 1996. Based on our current administrative streamlining plan, we anticipate that the FTE will reduce by 16.5 from the FY 1996 level.

REORGANIZATION

Question. Under the recent reorganization, ARS is charged with carrying out administrative support for the Cooperative State Research, Extension, and Education Service (CSREES), Economic Research Service and the National Agricultural Statistical Service. Provide a table identifying FTE contributions to ARS for each component agency of the Research, Education and Economics mission area from FY 1993 (the baseline for the streamlining plan) through FY 1997.

Answer. The FTE from component agencies of the Research, Education and Economics mission area did not transfer to ARS; employees were only organizationally transferred. The following reflects staff year effort provided to the component agencies:

	<u>Pre-Reorganization</u>			<u>Post-Reorganization</u>	
<u>Agency</u>	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>	<u>FY 1996</u>	<u>FY 1997</u>
CSREES	0	0	52.6	52.1	50.4
ERS	0	0	44.5 *	42.5	40.9
NASS	0	0	50.9 *	49.6	47.8
TOTAL	0	0	148.0	144.2	139.1

*Formerly, comprised the Economics Management Staff.

Question. Last year you reported that NASS and ERS would be assessed for management services at a level of \$3.3 million per agency. Were those reimbursements executed for those amounts?

Answer. The reimbursements were executed for actual costs for five months, incurred from April 30, 1995, in support of these agencies: NASS, \$1,514,800 and ERS, \$1,508,600. The balance was incurred prior to the reorganization against the Economics Management Staff organization.

Question. What will be reimbursed in FY 1996?

Answer. FY 1996 will be the first full year of service under ARS. The reimbursable agreements for FY 1996 are \$3.2 Million for NASS and \$3.0 Million for ERS.

Question. How many FTEs are supported by these dollars for each agency for FYs 1995 and 1996?

Answer. The FTEs supported by ERS and NASS on an annualized basis are as follows:

Agency	FY 1995	FY 1996
ERS	44.5	42.5
NASS	50.9	49.6

Question. Last year you stated CSREES would be assessed \$2.2 million in FY 1995. Was that the actual amount received by ARS?

Answer. The \$2.2 Million assessment was an annualized level based on the CSREES resources available to cover this cost. The actual costs incurred from April 30, 1995 to September 30, 1995, were \$971,820 and this amount was received by ARS.

Question. What level of assessment is planned for 1996?

Answer. The planned level of assessment is \$2.972 Million.

Question. What are the FTEs financed by the CSREES reimbursement in FYs 1995 and 1996?

Answer. The FTE supported by the CSREES reimbursement on an annualized basis are 52.6 FTE for FY 1995 and 52.1 FTE for FY 1996.

Question. Now that the reorganization is in place and consolidations have been finalized, what savings have occurred in terms of full-time equivalents and costs? Provide a table by function, e.g., Personnel, Accounting, Contracting Directors Office, Budget, Information, Program Staff, etc., to indicate where these savings were made through the reorganization consolidation.

Answer. Since the implementation of the reorganization was effective April 30, 1995, we achieved savings in FTE (3.74) and cost (\$152,300). Savings were spread across functional categories. Also, a commitment was made to place all administrative and financial management staff in the new organization.

ARS APPROPRIATIONS LAW - BUILDINGS/FACILITIES

Please describe your activities and funding obligations for FY 1995 and expected for FY 1996 under the provisions limiting construction, alteration, repair and improvements of buildings in the ARS appropriation language:

Question. The cost of constructing any one building shall not exceed \$250,000.

Answer. In FY 1995, one building was constructed at Beltsville, Maryland, under this provision at a cost of \$34,135. We are not presently aware of any FY 1996 obligations to be made by ARS under this unlimited building program limitation.

Question. Head houses and greenhouses which shall be limited to \$1,000,000.

Answer. No obligations were made by ARS in FY 1995 nor are any anticipated in FY 1996 under the headhouse and greenhouse building program limitation.

Question. Ten buildings to be constructed or improved at a cost not to exceed \$500,000 each.

Answer. No obligations were made by ARS in FY 1995 nor are any anticipated in FY 1996 under the ten buildings program limitation.

PANAMA CITY

Question. ARS Explanatory Notes indicates \$905,400 and 4 FTEs located at Panama City, Panama. What program is carried out at this location?

Answer. ARS screwworm research is carried out in Panama City. This program is focused on three principal activities in support of APHIS and FAO screwworm eradication efforts in Central America and the Caribbean region respectively. These include: characterization of screwworm habitats in Panama using remote sensing technology; improvement of screwworm surveillance, trapping and monitoring methods which includes development of an "Artificial Wound" technology for survey and trapping of feral screwworm populations; and conducting studies on ecology, biology and population dynamics of screwworm populations in the Caribbean region.

Question. How long has ARS been at this site?

Answer. ARS has been in Panama City since June 1994.

Question. What are your future plans?

Answer. Our future plans are to continue to conduct research to meet APHIS needs in its plan to eradicate the screwworm all the way down to the southern end of Panama and establish a permanent barrier in the Isthmus of Panama in the Darien zone. More specifically:

- ARS will continue to develop and provide remote sensing data to identify screwworm habitats and likely sites of screwworm infestations in cattle and wild animals.
- ARS will develop and evaluate chemical methods for backup screwworm control for quick response to emergency or screwworm infestations limited to small area(s).
- ARS will provide research support to FAO in its current and future efforts on eradication of screwworm from the Caribbean region.

MONTPELLIER, FRANCE

Question. The ARS Montpellier, France location estimates a program level of \$1,843,100. Please describe the program carried out here. How does this compare to that in Argentina?

Answer. The United States is subjected to a constant invasion of immigrant insects and weeds, e.g., gypsy moth, European corn Japanese beetle, sweetpotato whitefly, musk thistle, and bird weed. The forerunner of USDA laboratory in France was established in 1919 to meet this threat to agriculture and the environment. This was followed in 1940 with the establishment of a similar laboratory in Argentina. Foreign insect and weed pests typically enter the United States without any of their natural enemies found in their native habitat. The overseas biological control laboratories search in the appropriate country of origin for natural enemies. These natural control agents are carefully researched to insure host specificity prior to being introduced into the United States through well established quarantine procedures. Explorations range from Europe to Central Asia, China and Northern Africa. The laboratory in Argentina conducts similar studies and explores throughout Latin America.

Question. From where do most of the insect pests affecting U.S. Agriculture migrate -- Europe, Asia, Central and South America? Please fully discuss pest migration from these countries.

Answer. Immigrant insect and weed pests generally follow the patterns of commerce and travel. The majority have originated in Europe and Asia, but with the increased north-south trade Central and South America is also becoming an important source of immigrant pests. Not all pests arrive directly from the country of origin. The most single significant secondary source is Central and South America, including Mexico. A recent example is the Russian Wheat Aphid which initially migrated into the United States from Mexico, although it originated from the former Soviet Union. Additionally, some exotic weeds, were initially deliberately introduced as ornamentals or flood control agents, e.g., waterhyacinth and melaleuca in Florida and saltcedar (Tamarix) in the Southwest.

Consequently, research emphasis must be diverse. The biological control of these pests, once established in the U.S., depends upon research at the evolutionary source of origin of these pests where predators, parasites, or diseases also have co-evolved. Infestations from Central-South America which pose a high risk to the U.S. include the following:

Insects: whitefly, medfly, Caribbean fruit fly, Mexican fruit fly, screwworm, fire ant, Africanized bee, cucurbit beetles, leaf-cutting ants, cotton plant bug, South American bollworm, potato weevil, Brazilian cotton borer, Peruvian boll weevil, lucerne caterpillar, pasture scarab, black grapevine thrips, avocado seed moth, South American fruit fly, Peruvian cotton stainer, cottonseed bug, black perlaforia scale, pickleworm, melonworm.

Weeds: Waterhyacinth, morningglory, itchgrass, tropical soda apple, Brazilian pepper tree, parrotfeather, prickly sida, cocklebur, nutsedges, sicklepod, galinsager, hemp sesbania, balloonvine, creosotebush, snakeweeds, broomweeds, groundsel (Baccharis spp), tarbush.

Question. Identify the pests originating from these countries on which ARS is currently doing research.

Answer. Current insect and weed targets and their country of origin are presented are as follows:

Pest	Origin	States Affected
Gypsy Moth	Europe	Northeast
Codling moth	Central Asia	Northwest
Cereal leaf beetle	Europe, Central Asia	Northwest, Midwest
Pine shoot beetle	France	Midwest
Wheat stem sawfly	Siberia	Northwest
Sweetpotato / Silverleaf whitefly	Mediterranean, Europe, Middle East, W. & S.E. Asia, S. America	Southwest, Southeast
Russian wheat aphid	Europe, Russia, Middle East, W. Asia, China	States west of Mississippi River
Russian thistle	Italy, Turkey France, Kazakastan	CA
Plantain	France	Entire U.S.
Saltcedar	France, C. Asia, Mid East	Southwest
Skeletonweed	Turkey	Northwest
Hawkweeds	Europe	Northwest
Yellow starthistle	S. Europe	Northwest, Southwest
Leafy spurge	Eurasia	Northwest & Midwest
Knapweeds	Eurasia	Northwest & Midwest
Musk thistle States	Italy	Central & Southern
Common crupina	France, Greece	Northwest
Pink Bollworm	Australia Asia	AZ, CA
Melaleuca	Australia	FL
Diamondback moth, bollworms, corn earworms	Cosmopolitan	Cotton and Corn Belt

Waterhyacinth	Argentina	FL, LA
Tropical soda apple	Argentina, Brazil	FL, LA, MS
Snakeweed	Argentina	Southwest
Fire ant	Argentina, Brazil	Southern U.S.

Question. Identify the pests which your Argentina and French laboratories are targeting.

Answer. The insect targets now being researched by the ARS European Biological Control Laboratory include Cereal leaf beetle, Pine shoot beetle, wheat stem sawfly, codling moth, Russian Wheat Aphid, diamondback moth, gypsy moth, sweetpotato/silverleaf whitefly, and weed targets include Russian thistle, plantain, skeletonweed, common crupina, yellow starthistle, leafy spurge, bedstraw, knapweeds, hawkweeds, saltcedar, and musk thistle. The laboratory in France supplies about 70 percent of all biological control agents imported into the United States each year. The ARS South American Biological Control Laboratory is focused on weeds such as waterhyacinth, tropical soda apple, and snakeweed and insects such as fire ant, sweetpotato whitefly, and Heliothis.

Question. ARS is currently leasing space in Montpellier, France. What is the cost for leasing this space?

Answer. ARS has leased facilities at three sites in Montpellier. This costs \$118,748 at 5.0 French Francs/dollar.

Question. The Committee understands that this is a consolidation of research from previous locations in Rome, Italy and Behoust, France. What are the advantages of this location over the Rome and Behoust sites?

Answer. Montpellier, France, is a major center for agricultural research in Europe and hosts the consortium AGROPOLIS of which ARS is a member. Montpellier is also the location of the Australasian Biological Control Laboratory which has a similar mission. Additionally, the local universities have an enrollment of 50,000. This concentration of scientific endeavor is a very important consideration in developing collaborative efforts to the benefit of U.S. agriculture. Additionally, the Montpellier site is within the range of many of the past and present target pests. In contrast, Behoust, France, is a small village located well outside Paris and apart from any scientific institutions. The Rome laboratory was located in a rented villa which was in an isolated area. Communication with Italian scientific institutions was sporadic because of the isolation. Also, Rome is not a major center for scientific research in Italy, which is concentrated in Milan, Florence, Pisa, and Bologna.

Question. What is the current number of scientists at Montpellier?

Answer. There are 3 ARS and 5 Foreign Service National Ph.D. scientists and a total staff of 16 working for the ARS European Biological Control Laboratory, Montpellier, France. In addition, there is a Canadian scientist at this post and usually 1 or 2 visiting scientists and 3 to 4 graduate students.

Question. What is the SY capacity of the laboratory recently designed?

Answer. The new laboratory is designed to accommodate the current staff with additional space for visiting scientists on TDY. The total capacity would be 12 scientists.

Question. What is the total cost of this laboratory?

Answer. Current estimate at the prevailing exchange rate is \$3.5 million.

Question. What kind of lease cost comparison has the Agency completed in determining the need for another U.S. laboratory in France?

Answer. The Agency is proposing another ARS laboratory in France be constructed to relocate current research activities from temporary leased spaces to a permanent facility. The current operation and maintenance costs for the location are budgeted at \$197,000 which includes the leasing cost of \$118,748. It has been

estimated that the operation and maintenance cost for phase one of the new building will increase to \$130,000.

Question. What is the long-term plan for biocontrol research activities in France?

Answer. This laboratory has existed for 77 years. Its reason for existence is to provide biocontrol agents for immigrant pests and thus to protect U.S. agriculture. The McGregor Report (APHIS, 1971) indicated there are enough known potential pests to provide a constant problem for the next 900 years at the current rate of entry with the U.S., estimated to be one major new pest every 3 years. The ARS European Biological Control Laboratory will be a key element in the U.S. biological control strategy for the foreseeable future.

BUENOS AIRES, ARGENTINA

Question. ARS is also located at Buenos Aires, Argentina. What program is carried out here? In FY 1995, ARS obligated \$505,900. In FY 1996 and 1997, you estimated a funding level of \$367,500. Is your program diminishing at this site?

Answer. The appropriated level for the Argentina laboratory is \$367,500. Several agencies, ARS laboratories and universities provided temporary funding for specific projects in FY 1995 which increased the total to \$505,900.

Question. Does the Agency plan to build a U.S. facility in Argentina?

Answer. No, for in-country political reasons and lack of financial support, it is felt best to staff the current laboratory with Foreign Service Nationals and keep the operation at a low profile.

Question. Explain the reasoning for leasing vs owning a U.S. laboratory in these countries (France/Argentina).

Answer. The ARS European Biological Control Laboratory has been in France for 77 years and is the major source of biocontrol agents for the United States. The research conducted requires unique facilities not available through lease. This includes quarantine, greenhouse, biotechnology, and pathology laboratories. The Argentina operation is currently small and resources are not available to increase the research capability nor to contemplate construction of a laboratory.

Question. Has the Agency considered sending U.S. scientists on TDY assignments as opposed to either building or leasing. Please explain.

Answer. Sending U.S. Scientists on TDY assignments is one of three principal approaches ARS uses for conducting foreign research on insect and weed pests posing a threat to U.S. agriculture. These three approaches are:

a. Joint collaboration between ARS research units and foreign universities and scientific institutions, this arrangement being most common between U.S. and Mexico.

b. Direct ARS in-country field collection, evaluation, and research on biocontrol organisms of weeds and insects, conducted by ARS personnel in our laboratories in Montpellier, France, Hurlingham, Argentina; Brisbane, Australia; and Beijing, China. This includes a TDY program for stateside explorers who generally use the ARS foreign laboratories as a base of operations. The year-round research conducted at the foreign laboratories permits a more rapid and cost effective method to determine host range and biology of potential biocontrol agents. The TDY program provides the U.S. based scientist a better understanding of the immigrant pest in its native habitat where it usually is of no consequence to agriculture. In addition, there is also TDY exploration in other areas by ARS scientists.

c. Formalized international research agreements, between ARS and counterpart foreign scientific governmental institutions, with research in-country primarily conducted by foreign scientists supported by ARS funds. Currently, ARS has formal agreements with

Mexico, Brazil, Australia, France, China, Kazakstan, Peru, Israel, United Kingdom, Argentina, Korea, Japan, India, Russia, and the Ukraine.

BEHOUST, FRANCE

Question. What analyses were made before ARS established Behoust as a prime location for your research? What's changed?

Answer. Extensive analysis was made in 1980 of potential re-location of the ARS insect biocontrol laboratory. This included site visits throughout Europe. The program originally was located in a rented house in the suburbs of Paris. There was an urgent need to acquire a more suitable facility and location. The location of choice was southern France for programmatic reasons. Unfortunately, funding was not available to establish a laboratory at the Science Park in Antipolis, France (Montpellier). The Behoust facility was second choice and was possible because of a lease-purchase offer.

Question. How much money was spent in the establishment of Behoust, France as a laboratory, e.g., lease, cost of purchase, renovation etc.?

Answer. The Behoust facility was purchased in 1984 for \$630,600 including \$130,000 for renovations.

Question. What will the U.S. Government receive for sale of the Behoust laboratory site?

Answer. We have agreed to a purchase price of 3,000,000 French Francs which is approximately \$700,000 at the current exchange rate.

GEOGRAPHIC FUNDING

Question. Last year, the ARS FY 1996 Explanatory Notes Geographic Table documented program funding levels by location for the then current FY 1995. These funding levels were used and cited by the Appropriations Committee. In reviewing and comparing actual obligations for FY 1995 with the planned amounts given this Committee, there are noted differences. What is the reason for these discrepancies?

Answer. The reason for differences between planned levels reflected for FY 1995 in the FY 1996 Geographic Table and actual expenditures is that planned levels include only permanently allocated funds and the proposed implementation of current year increases to each location. However, actual obligations reflect all appropriated funds which have been allocated to a location and have been expended as of September 30, 1995. These totals can include funds temporarily transferred from the Salary Lapse account for a location's needs or funds temporarily or permanently transferred from Headquarters-managed accounts to meet Agency, Department, or National needs or initiatives.

Question. How do these differences, significant in many locations, impact Congress' directive to provide information and funding at the program, project and activity levels?

Answer. The differences represent temporary transfers of funds from Headquarters-managed accounts allocated to certain locations on the basis of their ability in meeting Agency, Department, or National needs or initiatives and in meeting contingency needs. The funding levels provided for 1995 in the 1996 Geographic table reflected our best estimate at the time. We will continue to honor Congress' directive to provide information and funding at the program, project and activity levels.

Question. What was the planned funding for each of the research projects at Stoneville, Mississippi? What were the actual obligations for each research project?

Answer. The information on the planned funding (final allocation including both permanent and temporary funds) and actual obligations for research projects at Stoneville, Mississippi follows:

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
STONEVILLE, MISSISSIPPI		
DEVELOP GERMPLASM AND SOIL AND WATER MANAGEMENT TO IMPROVE SOYBEAN PRODUCTION IN THE MID SOUTH	\$ 702,897	\$ 701,461
DEVELOP SOYBEANS THAT ARE PEST RESISTANT AND STRESS TOLERANT TO IMPROVE PRODUCTION IN THE SOUTH	244,947	244,710
CHARACTERIZE THE NATIONAL SOYBEAN GERMPLASM COLLECTION FOR THE SOUTHERN PRODUCTION AREA	264,282	264,168
HOST PLANT RESISTANCE TO SOYBEAN INSECTS	304,184	283,412
CONTROL STRATEGIES FOR HELIOTHIS/HELICOVERPA SPP. & OTHER FIELD CROP INSECTS IN COTTON AGROECOSYSTEM	974,672	1,088,944
BIOLOGICAL AND GENETIC CONTROL OF CROP PESTS EMPHASIZING HELIOTHIS	622,221	588,906
ALTERNATIVE CONTROL STRATEGIES FOR INSECT PESTS OF PECAN	120,177	102,315
EVALUATION OF CONTROL STRATEGIES FOR PESTS IN NARROW AND NORMAL ROW PLANTINGS OF COTTON	1,028	29,927
AREAWIDE MGMTNT OF COTTON INSECT PESTS IN MIDSOUTH DEV OF IMPROVED SURVEILLANCE & PEST MGMTNT TECHNOL.	616,576	568,854
MASS PROPAGATION TECHNOLOGY FOR THE BOLL WEEVIL, HELIOTHIS, HELICOVERPA & BENEFICIAL ORGANISMS	357,625	350,948
ENVIRONMENTALLY ACCEPTABLE COTTON PRODUCTION SYSTEMS FOR PEST CONTROL, YIELD AND QUALITY	443,668	449,102
GENETIC-PHYSIOLOGICAL PARAMETERS THAT ENHANCE FIBER QUALITY	452,633	589,506
BIOCHEMICAL GENETICS OF FIBER QUALITY AND ITS APPLICATION TO THE IMPROVEMENT OF COTTON VARIETIES	123,933	123,021
NATIONAL COTTON VARIETY TEST PROGRAM	419,713	411,654
KENAF PRODUCTION RESEARCH	4,673	3,759
AGRONOMIC AND ECONOMIC EVALUATION OF KENAF AS A FIELD CROP IN MISSISSIPPI	433,893	433,956
PROPAGATION OF AND INTERACTIONS OF HERBICIDES THE ENVIRONMENT AND MYCOHERBICIDES ON ERYTHROXYLUM	270,000	261,810
REDUCE HERBICIDE CONTAMINATION OF SURFACE WATER BY USING ALTERNATIVE MANAGEMENT SYSTEMS/COTTON PROD.	77,222	92,258
PERSISTENCE AND ACTIVITY OF HERBICIDES IN SOIL AND FACTORS AFFECTING MOVEMENT TO GROUNDWATER	408,254	422,700
MECHANISMS OF ACTION & RESISTANCE TO HERBICIDES, ALLELOCHEMICALS & PHYTOXINS IN WEEDS & CROPS	291,146	291,046
MICROBIOLOGICAL CONTROL OF AGRONOMIC WEEDS	473,772	476,504
IMPROVED WEED CONTROL METHODS FOR INTEGRATED CROP/PEST MANAGEMENT IN CONSERVATION TILLAGE	298,289	290,341
DEVELOP SUSTAINABLE INTEGRATED WEED MANAGEMENT SYSTEMS FOR COTTON SOYBEANS AND OTHER CROPS	110,933	91,072
SOIL QUALITY OF SUSTAINABLE AGRICULTURAL SYSTEMS & IMPACTS ON HERBICIDE & ALTERNATIVE WEED MGMT SYSTEM	219,106	210,702

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
<u>STONEVILLE, MISSISSIPPI (Cont.)</u>		
BIOCHEMICAL GENETIC AND ECOLOGICAL EFFECTS OF NATURAL AND SYNTHETIC HERBICIDES	110,886	112,277
REPLACEMENT OF HERBICIDES AND METHYL BROMIDE BY MICROBIOLOGICAL CONTROL OF WEEDS	364,038	374,847
COTTON GINNING RESEARCH TO MAINTAIN AND ENHANCE FIBER QUALITY	538,962	529,727
NEW TECHNOLOGIES IN COTTON GINNING	376	0
DEVELOPMENT AND IMPLEMENTATION OF NEW TECHNOLOGIES IN COTTON GINNING	558,327	564,418
CATFISH BREEDING, GENETICS, AND ENDOCRINOLOGY RESEARCH	1,279,764	1,272,682
IMPROVE WATER QUALITY BY DEVELOPMENT OF MORE EFFICIENT METHODS OF APPLYING HERBICIDES	270,919	265,653
DEVELOPMENT OF EFFICIENT CROP PRODUCTION SYSTEMS FOR CLAY SOIL	751,465	734,640
DEVELOP INNOVATIVE TECHNOLOGY FOR MORE EFFICIENT PESTICIDE APPLICATION IN FIELD CROPS	877,802	874,250
MID-SOUTH AREA SUPPORT	<u>2,482,240</u>	<u>2,649,850</u>
TOTAL	15,450,623	15,749,420

Question. Please provide, by project, similar planned versus actual obligations for the following locations: Athens, Georgia; Gainesville, Florida; Yakima, Washington; Phoenix, Arizona; Corvallis, Oregon; University Park, Pennsylvania; and Albany, California.

Answer. The information on the planned funding (final allocation including both permanent and temporary funds) and actual obligations for research projects at Albany, Athens, Corvallis, Gainesville, Phoenix, University Park and Yakima follows:

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
<u>ALBANY, CALIFORNIA (PLANT GENE EXPRESSION CENTER)</u>		
DETERMINATION OF THE MOLECULAR BASIS OF HEAVY METAL STRESS IN PLANTS	\$ 251,850	\$ 251,850
DETERMINATION OF THE MOLECULAR BASIS OF PHYTOCHROME-REGULATED GENE EXPRESSION	408,307	407,378
ISOLATION AND CHARACTERIZATION OF DEVELOPMENTALLY IMPORTANT GENES USING TRANSPOSON TAGGING METHODS	432,353	431,283
POLLEN MOLECULAR BIOLOGY IN CROP PLANTS	422,452	422,230
DEFINING THE MOLECULAR CELLULAR MECHANISMS OF HEAVY METAL CHELATION AND SEQUESTRATION IN PLANTS	242,890	241,945
MOLECULAR ASPECTS OF ETHYLENE BIOSYNTHESIS	587,175	586,848
DEVELOPMENT OF METHODOLOGIES FOR IDENTIFICATION AND ISOLATION OF PLANT GENES	<u>416,786</u>	<u>416,125</u>
TOTAL	2,761,813	2,757,659

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
ALBANY, CALIFORNIA (WESTERN REGIONAL RESEARCH CENTER)		
RENOVATION OF WRRC	\$ 950,672	\$ 947,174
TREATMENT AND REUSE OF WATER IN COMMERCIAL FOOD PROCESSING OPERATIONS	1,230,773	1,228,578
SAFETY EVALUATION & ELIMINATION OF NATURALLY OCCURRING TOXICANTS IN POTATOES & TOMATOES	1,069,237	1,066,468
BIOSENSORS IMMUNOCHEMICAL DETECTION METHODS FOR COMPOUNDS AFFECTING HEALTHFULNESS QUALITY OF FOODS	640,167	637,229
EXTRUSION PROCESSING OF INSECT DIETS FOR BIOLOGICAL CONTROL PROGRAMS	244,891	244,267
PROCESSING WHEAT AND OTHER CEREAL STARCHES INTO PRODUCTS WHICH REPLACE PETROLEUM BASED PLASTICS	646,633	641,362
CONTROL OF PHYSCOCHEMICAL AND NUTRITIONAL PROPERTIES IN EXTRUDED CEREAL BASED FOODS	240,639	240,013
FLAVOR OPTIMIZATION OF MAJOR FOOD CROPS THROUGH CONTROL OF METABOLIC PROCESSES	328,986	327,973
LIPID OXIDATION PRODUCTS IN FRYING OILS AND FOODS AS POTENTIAL HEALTH HAZARDS	356,149	355,531
DETECTION OF AFLATOXIN CONTAMINATION IN HUMAN FOODS BY IMAGING TECHNIQUES	410,752	409,270
IMAGE ANALYSIS AND OTHER PHYSICAL METHODS FOR DETECTION OF INCLUSIONS AND STRUCTURE IN FOOD	458,594	456,824
IMPROVING THE NUTRITIONAL AND HEALTH PROMOTING PROPERTIES OF CEREAL FOODS	744,937	741,063
PROTOTYPE ANALYSIS TO ESTABLISH DATABASE STRUCTURE FOR WHEAT & FOREST TREE SPECIES GENOME	282,150	282,031
MOLECULAR GENETIC MODIFICATION OF WHEAT GRAIN	609,073	605,823
DOMESTIC PRODUCTION OF NATURAL RUBBER	389,189	385,180
MODIFICATION OF VEGETABLE OILS AS RAW MATERIALS FOR INDUSTRIAL USES	632,819	631,283
BIOTECHNOLOGICAL APPROACH TO IMPROVEMENT OF POSTHARVEST PROPERTIES OF POTATO AND TOMATO	399,747	397,722
EFFECT OF ENVIRONMENT ON PROTEIN QUALITY IN WHEAT	708,797	705,383
RELATIONSHIP OF WHEAT QUALITY TO DISULFIDE-LINKED POLYMERS OF GLUTEN PROTEINS	449,877	448,409
IN VITRO CREATION & COMMERCIALIZATION OF HIGH SOLIDS TOMATOES & HIGH-SOLIDS, LOW-SUGAR POTATOES	590,843	583,513
NEW FRUIT AND VEGETABLE PROCESSING SYSTEMS FOR FOREIGN MARKETS PRODUCTS	632,723	631,457
NEW BACTERIAL POLYSACCHARIDES FOR FOOD AND INDUSTRY	306,174	304,583
DEVELOPMENT OF EDIBLE COATINGS TO KEEP LIGHTLY PROCESSED FRUITS AND VEGETABLES FRESH	464,023	463,168
NEW PROCESS OPERATIONS AND SYSTEMS FOR REFINING AND CONVERTING GRAINS TO VALUE ADDED PRODUCTS	402,926	401,636
NEW TECHNOLOGIES FOR SEPARATION OF WHEAT STARCH AND PROTEIN	320,020	316,986
IMPROVEMENT OF CITRUS QUALITY AND ENHANCEMENT OF CITRUS BYPRODUCT UTILIZATION	433,241	431,955
AFLATOXIN CONTROL IN TREE NUTS: ECOLOGICAL RELATIONSHIPS, AGRONOMIC PRACTICES, BIOLOGICAL	67,928	67,900
BREEDING FOR RESISTANCE TO AFLATOXIN CONTAMINATION IN ALMOND	52,121	52,121

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
<u>ALBANY, CALIFORNIA (WESTERN REGIONAL RESEARCH CENTER) (Cont)</u>		
GENETIC ENGINEERING OF TREE NUT CROPS FOR CONTROL OF AFLATOXIN	20,008	20,008
INTEGRATED PEST MANAGEMENT FOR YELLOW STAR THISTLE PHASE II	79,413	79,400
ARTHROPODS FOR BIOLOGICAL CONTROL OF WEEDS	285,059	280,064
QUALITY ASSURANCE OF FOOD PRODUCTS FROM LIVESTOCK GRAZING RANGELAND WEEDS	374,070	359,155
REDUCTION OF AFLATOXIN IN TREE NUTS AND FIGS THROUGH CONTROL OF MAJOR INSECT VECTORS	756,389	754,488
CONTROL AND PREVENTION OF AFLATOXIN FORMATION IN TREE NUTS	759,109	755,201
PACIFIC WEST AREA SUPPORT	<u>3,623,121</u>	<u>3,525,677</u>
TOTAL	22,723,063	22,536,554
<u>ATHENS, GEORGIA</u>		
IDENTIFICATION OF PLANT NATURAL PRODUCTS FOR USE AS AGRICULTURAL CHEMICALS	\$ 630,676	\$ 628,483
BIOLOGICALLY ACTIVE COMPOUNDS IN NICOTIANA SPECIES AND SELECTED TOBACCO CULTIVARS	387,623	387,334
ISOLATION, CHARACTERIZATION, & DEVELOPMENT OF VALUE-ADDED NATURAL PRODUCTS FOR SPECIALTY COMPOUNDS	391,752	395,901
DESIGN, PREPARATION & EVALUATION OF BIODEGRADABLE FUNGICIDES, HERBICIDES AND INSECTICIDES	511,956	495,113
THE VALUE-ADDING POTENTIAL OF BIOACTIVE PROTEINS	221,122	225,673
REPRODUCTIVE PHYSIOLOGY -- POLLEN-PISTIL INTERACTIONS LEADING TO FERTILIZATION	164,913	164,909
RELATIONSHIP OF CELL STRUCTURAL AND COMPOSITIONAL CHARACTERISTICS TO PRODUCT QUALITY	844,619	842,792
ENHANCING VALUE OF AGRICULTURAL PRODUCTS THROUGH USE OF MICROORGANISMS	330,709	329,534
USE OF DIELECTRIC PROPERTIES FOR MEASUREMENT AND SENSING OF PRODUCT COMPOSITION AND QUALITY	384,475	384,864
DEVELOPMENT OF SPECTROSCOPIC METHODOLOGIES TO MEASURE PRODUCT NUTRIENT COMPOSITION AND QUALITY	217,194	216,253
INTERFACING SENSORY, CHEMICAL, PHYSICAL/FUNCTIONAL PROPERTIES IN DEFINING STANDARDS OF FOOD QUALITY	207,236	206,922
ENGINEERING INNOVATIONS TO REDUCE MICROBIAL CONTAMINATION AND IMPROVE QUALITY OF POULTRY	786,401	781,951
BIOCHEMICAL & PHYSICAL CHANGES IN MEAT & POULTRY ASSOCIATED WITH PROCESSING & FURTHER-PROCESSING	646,541	645,975
PREVENT THE ATTACHMENT OF FOODBORNE PATHOGENS TO POULTRY SURFACES DURING SLAUGHTER AND PROCESSING	381,404	380,979
CONTROL OF SALMONELLAE IN POULTRY FROM THE BREEDER TO THE PROCESSING PLANT	521,160	520,696
CONTROL OF CAMPYLOBACTER JEJUNI IN POULTRY	584,221	605,594
NEUROENDOCRINOLOGY OF THE PERIESTROUS SURGE SECRETN OF LUTENZG. HOR. & FOLLCL. STIMULG. HOR. IN THE PIG	216,403	216,087
METABOLIC INTERFACE WITH NEUROENDOCRINE REGULATION OF LH AND GH SECRETION IN THE PREPUBERAL GILT	223,477	222,642
BIOREGULATION OF ADIPOCYTE HYPERPLASIA AND IDENTIFICATION OF PREADIPOCYTE (GENETIC) MARKERS	351,322	350,211
BRAIN MATURATIONAL PROCESSES WHICH FORM THE LUTEINIZING HORMONE PULSE GENERATOR	66,037	65,867

	FY 1995 PLANNED	ACTUAL OBLIGATION
ATHENS, GEORGIA (Cont.)		
REDUCTION OF MYCOTOXIN HAZARDS THROUGH ASSESSMENT OF THEIR TOXICOLOGICAL PROPERTIES	558,328	563,695
FORMATION AND TOXICITY OF METABOLITES OF FUSARIUM MONILIFORME	945,736	941,739
TOXICOLOGICAL PROPERTIES OF NATURALLY OCCURRING COMPOUNDS OF AGRICULTURAL IMPORTANCE	250,466	245,784
GENETIC DETERMINANTS AND LIMITS TO SELECTION FOR GROWTH IN POULTRY	182,284	182,089
EFFECTS OF CLIMATIC ENVIRONMENT ON THE TRANSMISSION & DEVELOPMENT OF DISEASE IN POULTRY	440,601	441,423
ENVIRONMENTAL AND MICROBIAL INFLUENCES ON THE IMMUNE RESPONSE OF THE CHICKEN	252,802	252,389
PATHOGENESIS OF SALMONELLA ENTERITIDIS IN CHICKENS	925,812	924,968
PREVENTION AND CONTROL OF NEWCASTLE DISEASE IN COMMERCIAL POULTRY	545,405	545,396
APPLICATION OF MOLECULAR BIOLOGICAL TECHNIQUES TO THE CONTROL OF AVIAN INFLUENZA	682,510	682,463
NITROGEN DYNAMICS	522,337	526,186
CONSERVATION TILLAGE STRATEGIES FOR LONG-TERM SUSTAINABLE PROD.ON ERODED SOU. PIEDMONT LAND	256,957	252,496
CROP CULTURE, SOIL CARBON, SOIL NITROGEN AND SOIL WATER RELATIONS IN THE SOUTHERN PIEDMONT	206,195	204,194
OPTIMIZE ROOTING DEPTH TO MINIMIZE PLANT WATER STRESS, EROSION, AND GROUNDWATER POLLUTION	259,157	261,608
IMPROVE LAND AND FORAGE MANAGEMENT PRACTICES CONSERVATION AND GRAZING IN THE SOUTHERN PIEDMONT	266,720	266,894
MANAGING SOIL AND WATER RESOURCES FOR SUSTAINABLE AGRICULTURAL SYSTEMS	393,298	382,721
IMPROVING BEEF-FORAGE SYSTEMS IN THE SOUTHEAST	259,805	266,898
PROCESSING CONTROL OF RIGOR DEVELOPMENT AND MEAT QUALITY FOR POULTRY PECTORALIS MUSCLE	136,843	136,560
SOUTH ATLANTIC AREA SUPPORT	<u>4,812,479</u>	<u>4,878,982</u>
TOTAL	19,966,976	20,024,265
CORVALLIS, OREGON		
DEVELOPMENT OF ON-FARM GRASS STRAW UTILIZATION	\$ 196,570	\$ 189,349
HOP GENETICS, PRODUCTION, AND UTILIZATION; GERMPLASM IMPROVEMENT, EVALUATION, AND MAINTENANCE	290,206	290,282
IMPROVING FORAGE, TURFGRASS, AND LEGUME SEED QUALITY AND PRODUCTION	609,035	606,385
CHARACTERIZATION OF ENVIRONMENTAL AND NUTRITIONAL INDUCED CYTOKININ CHANGES IN WHEAT	194,917	198,428
GRASS SEED CROPPING SYSTEMS FOR SUSTAINABLE AGRICULTURE	491,801	505,963
WEED CONTROL AND STRAW UTILIZATION OF GRASSES GROWN FOR SEED	511,292	526,931
EPIDEMIOLOGY AND MANAGEMENT OF DISEASES OF GRASSES GROWN FOR SEED	382,025	361,579
BIOLOGICAL CONTROL OF FIRE BLIGHT OF PEARS AND APPLES	69,904	68,660
TESTING MINOR USE PESTICIDES ON FLORAL AND NURSERY CROPS	55,932	44,937

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
<u>CORVALLIS, OREGON (Cont.)</u>		
PRODUCTION OF MYCORRHIZAL FUNGI FOR IMPROVED BIOCIDE RESISTANCE & HOST PLANT GROWTH AND YIELD	237,046	243,051
PARTITIONING OF PHOTOSYNTHATE AS INFLUENCED BY GENOTYPE, MYCORRHIZAE & AIR ENRICHED WITH CO2	140,634	142,140
CHANGES IN GENE EXPRESSION AND CYTOKININ LEVELS THAT ACCOMPANY FLORAL INDUCTION OF PERILLA CRISPA	163,357	164,396
GERMPLASM ENHANCEMENT AND CULTIVAR DEVELOPMENT OF BLACKBERRY, STRAWBERRY, BLUEBERRY AND RASPBERRY	379,203	386,716
EFFECTS OF BENEFICIAL RHIZOSPHERE MICROORGANISMS ON PLANT GROWTH AND HEALTH	378,198	379,730
EPIDEMIOLOGY AND CONTROL OF EASTERN FILBERT BLIGHT	130,581	131,479
MOLECULAR BASIS OF RHIZOSPHERE INTERACTIONS OF BACTERIAL BIOCONTROL AGENTS AND PLANT PATHOGENS	199,946	203,259
BIOLOGY, CHARACTERIZATION, AND CONTROL OF VIRUSES INFECTIOUS TO SEED-PROPAGATED HORTICULTURAL CROPS	189,635	183,115
BIOLOGY AND CONTROL OF DISEASES OF SMALL FRUIT CROPS	355,183	357,581
COLLECTION, PRESERVATION, DISTRIBUTION OF SMALL FRUITS, PEARS, FILBERTS, MINT AND HOPS	586,387	593,876
ALTERNATIVE GERMPLASM STORAGE TECHNOLOGIES	<u>179,727</u>	<u>174,409</u>
TOTAL	5,741,579	5,752,266
<u>GAINESVILLE, FLORIDA</u>		
ASSESSMENT OF GIBBERELIC ACID AS A NEW TOOL FOR MANAGEMENT OF TEHPRITID FRUIT FLIES	\$ 86,800	\$ 86,785
MANIPULATION OF THE GENETICS AND DEVELOPMENT OF AGRICULTURALLY IMPORTANT PEST/BENEFICIAL INSECTS	742,275	743,099
BIOREGULATION OF GROWTH AND DEVELOPMENT OF STORED PRODUCT INSECTS	269,835	272,682
POPULATION SURVEILLANCE AND DISRUPTION OF REPRODUCTION OF STORED-PRODUCT INSECTS	757,339	762,642
ACOUSTICAL COMMUNICATION AND ELECTRONIC DETECTION OF INSECT POPULATIONS	436,468	439,273
CONTROL HELIOTHIS/HELICOVERPA AND ARMYWORMS IN COTTON WITH SEMIOCHEMICALS	99,200	99,581
INTEGRATED CONTROL DIAMONDBACK MOTH WITH PHEROMONES, PARASITIDS AND BIOLOGICAL PESTICIDES	98,800	99,924
BEHAVIORAL ECOLOGY AND MANAGEMENT OF CROP INSECT PESTS WITH SEMIOCHEMICALS	431,611	432,653
INSECT BIOLOGICALLY-BASED CONTROL THROUGH BEHAVIOR MODIFICATION	663,519	664,953
CHEMICAL AND BIOCHEMICAL MODIFIERS OF INSECT BEHAVIOR AND PHYSIOLOGY	1,082,443	1,200,780
MODELING & SIMULATION OF INTEGRATED MGT. SYS. FOR ARTHROPODS OF MEDICAL AND VETERINARY IMPORTANCE	425,842	425,136
ECOLOGY AND CONTROL OF IMPORTED FIRE ANTS	469,728	470,663
ALTERNATIVE IMPORTED FIRE ANT TECHNIQUES	358,333	362,882
IMPORTED FIRE ANT BEHAVIOR, PHYSIOLOGY AND BIOCHEMISTRY	170,380	172,051
INTEGRATED CONTROL OF INSECT PESTS IN AN URBAN ENVIRONMENT WITH EMPHASIS ON ROACHES, FLEAS & ANTS	612,663	612,343
MANAGEMENT OF TERMITES AS URBAN PESTS IN THE AMERICAN PACIFIC	129,444	133,106

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
<u>GAINESVILLE, FLORIDA (Cont)</u>		
GENETICS, GENETIC CONTROL AND PHYSIOLOGY OF INSECTS AFFECTING MAN AND ANIMALS	723,496	723,116
CONTROL OF AND PERSONAL PROTECTION FROM MOSQ. & OTHER VECTORS OF MEDICAL & VETERINARY IMPORTANCE	488,037	491,775
BIOLOGICAL CONTROL OF MOSQUITOES AND GNATS OF MEDICAL AND VETERINARY IMPORTANCE	486,201	490,609
ECOLOGY, BIOL. CONT., & INTEGRATED MGMT OF FILTH BREEDING FLIES IN THE RURAL AND URBAN ENVIRONMENTS	486,670	489,777
SOIL, PLANT, AND ATMOSPHERIC FACTORS GOVERNING CITRUS WATER RELATIONS, PHOTOSYNTHESIS, AND GROWTH	128,233	132,576
CARBON DIOXIDE AND CLIMATIC CHANGE EFFECTS ON CROPS AND TRACE GAS EXCHANGE WITH THE ATMOSPHERE	326,824	326,743
A MOLECULAR APPROACH TO IMPROVING ADAPTATION OF FORAGE AND PASTURE GRASSES	321,307	324,267
MOLECULAR AND CELLULAR STUDIES ON GENE REGULATION IN MAIZE AND SORGHUM	443,986	443,569
LIMITATIONS OF ENVIRONMENTAL STRESSES AND PHYSIOLOGICAL RESPONSES ON CROP PRODUCTIVITY	<u>291,352</u>	<u>291,088</u>
TOTAL	10,530,786	10,692,073
<u>PHOENIX, ARIZONA</u>		
SUPPRESS PINK BOLLWORM POPULATIONS WITH STEINERNEMA RIOBRAVIS CARPOCAPSAE	\$ 112,500	\$ 112,669
MANAGEMENT SYSTEMS FOR PINK BOLLWORM, SWEETPOTATO WHITEFLY AND COTTON INSECT COMPLEXES IN THE WEST	2,261,670	2,260,128
SWEETPOTATO WHITEFLY MANAGEMENT SYSTEMS	247,362	247,745
GERMPLASM IMPROVEMENT, COTTON PEST-HOST PLANT INTERACTIONS AND ENVIRONMENTAL STRESS RESEARCH	1,153,562	1,153,358
INTEGRATED IRRIGATION SYSTEM WATER MANAGEMENT	731,992	731,761
PROTECTION OF GROUNDWATER QUALITY	773,666	773,548
TECHNOLOGY FOR IMPROVED MANAGEMENT OF IRRIGATED AGRICULTURE	217,179	217,273
PLANT GROWTH AND WATER USE AS AFFECTED BY ELEVATED CO2 AND OTHER ENVIRONMENTAL VARIABLES	743,148	743,648
EVALUATING PLANT DYNAMICS AS RELATED TO WATER CONSERVATION & CLIMATE CHANGE USING REMOTE SENSING	550,888	551,831
FARM MANAGEMENT DECISION SUPPORT USING A REMOTE SENSING AND MODELLING APPROACH	188,475	188,390
GERMPLASM IMPROVEMENT AND CULTURAL DEVELOPMENT OF NEW INDUSTRIAL CROPS	<u>725,008</u>	<u>724,678</u>
TOTAL	7,705,450	7,705,029
<u>UNIVERSITY PARK, PENNSYLVANIA</u>		
CONTROLS ON PHOSPHORUS EXPORT FROM AGRICULTURAL HILL LAND WATERSHEDS	\$ 94,723	\$ 95,055
RIPARIAN ZONE CONTROLS ON NITROGEN ENTRY INTO NORTHEASTERN STREAMS	101,309	100,604
GROUNDWATER RECHARGE, GROUNDWATER FLOW, AND SOURCE AREAS OF RUNOFF IN NORTHEASTERN UPLAND WATERSHEDS	457,185	440,342
DELINEATING AND MANAGING CRITICAL SOURCES OF PHOSPHORUS IN AGRICULTURAL WATERSHEDS	205,296	201,281
CHARACTERIZE SPATIAL AND TEMPORAL VARIABILITY OF SOIL PROPERTIES CONTROLLING FLOW IN CROP ROOT ZONE	298,623	300,841
NUTRIENT LOSS TO GROUND AND SURFACE WATERS UNDER INTENSIVELY MANAGED FORAGE PRODUCTION SYSTEMS	407,746	393,995

	FY 1995	
	PLANNED	ACTUAL OBLIGATION
<u>UNIVERSITY PARK, PENNSYLVANIA (Cont.)</u>		
BIOCHEMICAL DETERMINANTS FOR GAMETOGENESIS AND DISEASE RESISTANCE IN FORAGE SPECIES	305,240	304,984
MANAGEMENT OF LEGUME/GRASS MIXTURES TO MAXIMIZE PASTURE PERSISTENCE AND PRODUCTIVITY	266,259	268,184
INSECT PROBLEMS AND DISEASES OF PASTURE PLANTS: BIOLOGY, ETIOLOGY, AND NON-CHEMICAL CONTROL	11,000	11,118
INSECT PROBLEMS AND DISEASES OF PASTURE PLANTS: BIOLOGY, ETIOLOGY, AND NON-CHEMICAL CONTROL	<u>637,854</u>	<u>637,897</u>
TOTAL	2,785,235	2,754,301
<u>YAKIMA, WASHINGTON</u>		
MINOR USE PESTICIDE RESIDUE INVESTIGATIONS	\$ 321,050	\$ 338,151
MINOR USE PESTICIDES FIELD INVESTIGATIONS	107,111	107,109
AREAWIDE NONPESTICIDE MANAGEMENT OF CODLING MOTH IN APPLES AND PEARS IN THE PACIFIC NORTHWEST	856,479	841,631
MANAGEMENT OF INSECT PESTS OF APPLE AND PEAR	943,674	942,147
DEVELOPMENT OF NEW CONTROL STRATEGIES FOR GREEN PEACH APHID AND COLORADO POTATO BEETLE	1,090,715	1,089,043
IMPROVED QUARANTINE TREATMENTS FOR CODLING MOTH INFESTING APPLES AND PEARS	<u>623,412</u>	<u>623,353</u>
TOTAL	3,942,441	3,941,434

TRANSGENIC CROPS

Question. What is USDA's position regarding the widespread use of transgenic crops?

Answer. USDA is supportive of this technology, and has developed a review process in APHIS that is designed to ensure the safety of crops bred using this technology. Genetic engineering of crops is a technology that has the potential of creating new plant forms and incorporating quality and insect and disease resistance factors into crops that may not be possible through conventional breeding. This technology has led to the development of several pest and disease resistant crops that are presently in commerce. Crop diversity on the farm is essential in avoiding crop disasters resulting from genetic uniformity such as the 1970 Southern Corn Leaf Blight epidemic. Responsible management of the use of transgenic crops is no different than proper concern for any other highly bred crop germplasm. While genetic uniformity does not necessarily imply genetic vulnerability, it is one factor to consider in the widespread use of important new germplasm.

Question. What is your position with regard to the Federal government funding research on various aspects of transgenic crops and animals?

Answer. Federal funding of various aspects of research on transgenic plants and animals is in the public interest for several reasons. First, publicly funded short-term transgenic research goals will allow the Federal government to protect new discoveries and develop them for the benefit of the general public. Industrial partnerships can be developed that support commercialization of inventions from Federal laboratories. In addition, long-term Federal support for this developing technology will allow basic science exploration of animal and plant improvement without a short-term commercial goal. The value of this basic research will allow the development of new principles that can be utilized for biological improvement in the future.

Question. Do you believe that the USDA should initiate and conduct research aimed at validating the best resistance management plan for transgenic varieties?

Answer. ARS should continue to initiate and conduct research to understand the mechanisms of host plant resistance to insect pests and pathogens as well as pest and pathogen virulence leading to host plant resistance breakdown. Through a more complete understanding of the mechanisms involved in both host and parasite, a better understanding can be acquired on how to deal with transgenics involving the same types of genetic mechanisms.

STAFFING, EXPENSES, AND TRAVEL

Question. To what extent, if any, are expenses of the Office of the Under Secretary for Research, Education and Economics, including those of staff, being charged to the agencies making up the Research, Education and Economics mission agency or any other USDA agency?

Answer. During FY 1996, the REE agencies are providing funding for staff support, travel expenses, and computer equipment as follows:

ARS:	Detailees in the amount of \$206,900, travel expenses in the amount \$5,400, and computer equipment in the amount of \$16,400.	
CSREES:	Detailees in the amount of \$179,200 and travel expenses in the amount of \$2,100.	
ERS:	Detailees in the amount of \$74,700 and computer equipment in the amount of \$3,500.	
NASS:	Detailees in the amount of \$84,600.	

Question. What is the funded FTE position level for the Office of the Under Secretary for Research, Education and Economics and the current on-board staffing level (FTE equivalent) in this office?

Answer. The FY 1996 Budget for the Office of the Under Secretary for Research, Education, and Economics is 5 FTE's at a level of \$520,000.

Current on-board staffing level in this office is:

Dr. Karl N. Stauber	Under Secretary	5/95-present
Dr. Catherine E. Woteki	Deputy Under Secretary	1/96-present
Veronica De La Garza	Confidential Assistant	11/94-present
Kristie Kelm	Secretary	5/95-present
Teresa Neal	Secretary	1/96-present

Question. What is your policy on detailing USDA or other federal agency personnel to the Office of the Under Secretary for Research, Education, and Economics. Please provide a comprehensive list of all USDA or other federal agency detailees to this office in the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer. The appropriation of \$520,000 for the Office of the Under Secretary pays for the salaries of the Under Secretary, one Deputy Under Secretary, two support staff, and one assistant to the Under Secretary. These five individuals alone cannot effectively oversee and manage more than 10,000 employees distributed throughout the country, more than 100 separate facilities, and the \$1.8 billion portfolio of programs within the REE mission area, especially during a time of significant reorganization and streamlining. These activities directly involve the Office of the Under Secretary and, as a result, we have detailed staff to the office. We do not have formal, written policy on the detail of USDA or other federal agency personnel to this office.

Staff detailed to the Office of the Under Secretary fall into two generic categories. The first category includes staff working on special projects. We currently have a staff member on detail from ARS to support the Department's activity and responsibilities due to its participation in the President's National Science and Technology Council. The REE mission area represents the Department on the NSTC and this staff person is the liaison between NSTC and USDA.

We also have a person on detail who is working on implementation of our GPRA strategic plan, implementation of the Strategic Planning Task Force, a new function created by the 1996 Farm Bill, and is evaluating the crosscutting functions that currently report to the Office of the Under Secretary. These are functions directly managed by the Office of the Under Secretary.

The second category of detailed staff include those necessary to perform the functions of the Office of the Under Secretary. As originally proposed by former Secretary of Agriculture Ed Madigan when he was a member of Congress and, subsequently, as directed by Congress in the Agriculture Reorganization and Crop Insurance Reform Act of 1994, the Department and the REE mission area have moved to consolidate multiple agency functions into one coordinated function--located in a "lead agency" -- that serves all four agencies and the Office of the Under Secretary. The administrative, financial management, and legislative affairs functions have been consolidated to serve the mission area, with Administrative and Financial Management located in ARS and Legislative Affairs located in CSREES. Budget and communications functions continue to be critical to the daily operation of the agencies and, therefore, remain in each agency. However, to ensure that agency budget and communications activities support the Office of the Under Secretary and the Department, we have appointed two coordinators. The mission area communications coordinator is detailed from CSREES and the budget coordinator is detailed from ERS. To further assist in the management of REE's \$1.8 billion portfolio, a confidential assistant is detailed to the Office of the Under Secretary from ARS.

Employees have been detailed to the Under Secretary's office to meet temporary work needs within the office which cannot be met by existing staff. The following is a list of detailees.

<u>Name</u>	<u>Title</u>	<u>Duration</u>
Kevin Barnes	Agricultural Statistician	9/95 to 11/95
Dennis Childs	Staff Scientist	1/95 to 6/96
Millie Evano	Secretary	10/94 to 4/95
Sam Evans	Supervisory Economist	7/93 to 1/95
Mitch Geasler	Special Assistant	1/96 to Present
Joe Glauber	Senior Economist	1/93 to 8/95
Mildred Guard	Secretary	1/95 to 6/95
Hubert Hamer	Survey Statistician	1/94 to 4/94
Deborah Hanfman	Information Specialist	1/96 to Present
Gene Hasha	Agricultural Economist	7/93 to 1/95
Kelly Huhn	Secretary	6/94 to 1/95
Kelly Huhn	Secretary	3/96 to Present
Mary Beth Huhn	Secretary	5/94 to 11/94
Maureen Kelly	Legislative Coordinator, REE	11/95 to Present
Eleanor Lanier	Secretary	11/94 to 1/95
Sara Mazie	Budget Coordinator, REE	5/96 to Present
Nora McCann	Secretary	1/95 to 3/95
Barbara Meister	Confidential Assistant	8/95 to Present
Theresa Neal	Secretary	3/95 to 12/95
Debra Reed	Program Analyst	7/95 to 10/95
C. Steve Teasley	Communications Coord., REE	1/96 to Present
Kyra Toland	Secretary	12/95 to 3/96

Question. Are employees of the agencies making up the Research, Education and Economics mission area detailed to other USDA or other federal agency offices? Please provide a comprehensive list of all employees of these agencies or the Office of the Under Secretary detailed in the past year, the length of the detail, and the purpose of the detail, and the person's employing office.

Answer. The following table lists the requested information for affected REE employees. They are listed by employee agency.

National Agricultural Statistics Service

Employee Name	Detailed To:	Length	Purpose
R. Pecso	NRCS	4 Mon	Statistical Design
P. Kott	ARS	3 Mon	Statistical Analysis
	AMS	3 Mon	Statistical Analysis
V. Matthews	Commerce- Census Bureau	1 Yr	Statistical Analysis
E. Allen	Commerce- Census Bureau	1 Yr	Statistical Analysis
D. McCormick-Myers	Federal Committee Statistical Methodology	1 Yr	Statistical Analysis
E. Mitchell	Agency for International Development	1 Yr	Technical Assistance
T. Neal	Office of Under Secretary	9 Mon	Secretarial Support
L. Raudenbush	Office of Personnel	9 Mon	Employee Development Asst

Economics Research Service

N. Ballenger	National Research Council	1 Yr	Natural Resources Research
K. Baum	Foreign Agri. Service	1 Yr	Technical Assistance
B. D'Silva	Foreign Agri.	1 Yr	Technical Assistance
P. Sarnedra	Foreign Agri. Service	2 Mon	Technical Assistance
C. Mabbs-Zeno	Foreign Agri. Service	1 Yr	Technical Assistance
D. Lee	National Agricultural Statistics Service	1 Yr	Publication Editing
T. Thrash	Federal Quality Institute	3 Mon	Training Assistance
M. Olliger	Commerce	6 Mon	Rural Data Assistance
C. Christenson	Foreign Agri. Service	3 Mon	Technical Assistance
G. Gardner	Foreign Agri. Service	1 Yr	Technical Assistance
A. Dommen	Foreign Agri. Service	20 Dys	Technical Assistance
K. Gray	Foreign Agri. Service	5 Mon	Technical Assistance
C. Overton	Foreign Agri. Service	24 Dys	Technical Assistance
G. Frisvold	Council of Econ. Advisors	1 Yr	Technical Assistance

Cooperative State Research, Education and Extension Service

C. Ainsworth-Wright	National Perf. Review	6 Mon	Legislative Duties
N. Cunningham	Washington Service Center	4 Mon	Computer Assistance
K. Hahn	Office of the Secretary	17 Mon	Secretarial Assistance
J. King	Office of the Secretary	18 Mon	Secretarial Assistance
M. Spencer	MAP Program Office	6 Mon	Assistance to MAP Projects
S. Smith	Office of Personnel	1 Mon	Secretarial Assistance
H. Lowenstein	Rural Business & Community Development Service	4 Mon	Computer Assistance

Agricultural Research Service

M. Robinson	International Atomic Energy Agency	1 Yr	Cooperative program on animal production and health
D. Hoffman	National Institute of Science and Technology	10 Mon	White House Fellowship

FOREIGN TRAVEL

Question. Please provide a detailed list of all foreign travel taken by the Under Secretary or any employee of that office, or the head of any agency reporting to the Under Secretary, including: duration, destination, cost, purpose, account charged for the cost of the travel, and the number of employees accompanying the individual. Also provide information on foreign travel of all employees of the agencies to include numbers of trips, total cost and account charged, summarized by major categories for the purpose of travel, e.g., to present professional papers, do scientific research or fieldwork, to attend meetings, etc.

Answer. A detailed list of all FY 1995 foreign travel taken by the Under Secretary for Research, Education and Economics (REE), or any employee of this office, is as follows:

Employee	Dates of Travel	1/ Destination	Cost	Purpose	Acct. Charged
Karl Stauber	9/2-8/95	Paris, France	\$1,505	Attend Organization for Economic Cooperation & Development (OECD) Conference	REE
Floyd Horn	11/7-13/94	Tegucigalpa, Honduras	\$911	Attend Central America Screwworm Commissioners Meeting	REE
Floyd Horn	5/23-27/95	Mexico City, Mexico	\$1,396	Review and discuss research activities under the U.S./Mexico Cooperative Agreements	REE

1/ Excludes travel to U.S. territories and possessions.

The following represents FY 1995 foreign travel taken by the heads of the REE agencies and their respective agency foreign travel statistics:

Administrator: (Note: One employee accompanied the Administrator on the following trips)

Employee	Dates of Travel	Destination	Cost	Purpose	Account Charged
R. D. Plowman	1/7-23/95	Japan: Tsukuba, Tokyo, Kyoto, PRC: Beijing Korea: Seoul, Suwon, Taejon	\$7,645	Represented USDA as a member of the S&T delegation Concluded negotiations on MOU between ARS and the Korean Rural Dev. Adm. for cooperative research	ARS
R. D. Plowman	5/15-30/95	Israel: Tel Aviv Greece: Athens, Thessaloniki, Greece France: Paris, Montpellier	\$3,100	USDA representative at the Binational Agri. Res. & Dev. (BARD) meeting Meet with Greek officials concerning biocontrol res. program Meet with ambassador and 1890 students working in Montpellier; Site visit to Montpellier.	ARS

All foreign travel taken by ARS employees during FY 1995 is as follows:

<u>Employees</u>	<u>Trips</u>	<u>Cost</u>	<u>Account Charged</u>
1,226	1,541	\$1,654,038	ARS

Purpose: Foreign travel was in support of presenting scientific findings at international conferences, collaborating and reviewing research at international organizations, collecting germplasm and biological control organisms in foreign countries.

Economic Research Service (ERS)

Administrator: (Note: one employee accompanied the Administrator on the following trip)

Employee	Dates of Travel	Destination	Cost	Purpose	Account Charged
John Dunmore (Acting)	4/8-12/95	Paris, France	\$1,529	Attend Economic Conference	ERS

Other foreign travel taken by ERS employees during FY 1995 is as follows:

<u>Employees</u>	<u>Trips</u>	<u>Cost</u>	<u>Account Charged</u>
305	204	\$ 163,000 *	ERS

Purpose: Foreign travel was to attend economic conferences and to provide technical assistance to European emerging democracies and other nations of the world.

* Amount excludes \$255,536 reimbursed by other organizations.

National Agricultural Statistics Service (NASS)

Administrator: (Note: four NASS employees accompanied the Administrator to Nicaragua and one NASS employee accompanied the Administrator to Romania and Hungary)

Employee	Dates of Travel	Destination	Cost	Purpose	Account Charged
Donald M. Bay (four NASS employees accompanied the Administrator to Nicaragua)	10/4-16/94	Nicaragua and Chile	\$5,614	Nicaragua: Review joint NASS/ Nicaragua project, participate in formal presentation of the Nicaragua Agricultural Survey Results, and discuss future projects Chile: Attend United Nations Economic Comm. meeting for Latin America and Caribbean on statistical matters	NASS
Donald M. Bay (one NASS employee accompanied the Administrator to each country)	9/10-24/95	Romania and Sweden	\$4,881	Romania: Review joint NASS/ Romania agricultural statistics project and develop future program of work Sweden: Attend 9th Int. Round Table on Business Survey Forms	NASS - \$1,640 Reimbursed \$3,241 (Emerging Democracies funds, 1990 Farm Bill)

Other foreign travel taken by NASS employees during FY 1995 is as follows:

<u>Employees</u>	<u>Trips</u>	<u>Cost</u>	<u>Account Charged</u>
57	119	\$ 44,000 *	NASS

* Amount excludes \$309,000 reimbursed by other organizations.

Purpose: The majority of NASS international travel is performed in support of reimbursable technical assistance and training for improvement of the agricultural statistics programs in foreign countries. The non-reimbursable travel is for presentation and exchange of technical information and methodology at international meetings and conferences.

Cooperative State Research Education, and Extension Service (CSREES)

Administrator: No foreign trips were taken in FY 1995 by the Administrator or Acting Administrator, CSREES.

Other foreign travel taken by CSREES employees during FY 1995 is as follows:

<u>Employees</u>	<u>Trips</u>	<u>Cost</u>	<u>Account Charged</u>
14	21	\$ 34,000 *	CSREES

* Amount excludes \$15,242 reimbursed by other organizations.

Purpose: CSREES scientists and national program leaders attended international meetings to present papers, serve as meeting delegates, and participate in extension projects in Eastern Europe.

ARS BUILDINGS AND FACILITIES

Question. Please provide the Committee with costs and projects completed and planned for the modernization of each of ARS' Regional Research Centers.

Answer. The Department has established a Facility Task Force to investigate the utilization on Agricultural research facilities. Pending the results of this Task Force, the status of modernization efforts at the four Regional Research Centers is as follows:

Southern Regional Research Center (SRRC): The SRRC Modernization involved a complete renovation of the surrounding site and Chemical Wing and included such items as asbestos abatement, new and upgraded drainage, landscaping, equipment pads, pavement repairs, retaining walls, and handicapped ramps. Work to the interior of the building will include replacement of HVAC systems, reconfiguring each laboratory module, new stairwell to comply with safety codes, replacement of floor finishes, new windows and complete patched, primed, and painted walls and ceilings as necessary. Total cost is estimated at \$17.8 million, phased over 9 years.

Design is complete for all phases of the Chemical Wing project. Construction for Phase I was awarded in FY 1991 for \$1.4 million. Phase II was awarded in FY 1992 for \$2.4 million using Agency funds. Phases III, IV, and V were awarded in FY 1992 for \$5 million. (In FY 1992, \$1,950,000 was specifically appropriated for Phase II. However, this budget line item amount was not sufficient to pay the cost of Phase II which totals \$2.7 million for construction, contingency, and architect-engineer inspection services. The \$1,950,000 was used to award Phase V.) In FY 1994, \$2.667 million was appropriated for Phase VI of the Chemical Wing and in FY 1995, \$2.934 million was appropriated for construction of Phase VII. These phases were awarded in FY 1996.

In FY 1993, \$1,651,000 was appropriated. This funding was used for design and construction of Phase I site repair work. The FY 1996 appropriation of \$900,000 was used to award Phase 2 of the site repair work.

The remaining elements of SRRC that need to be modernized are the Administration Wing, Textile Wing, and the Industrial Wing. It is estimated the completion of the SRRC modernization program will require an additional \$21.6 million. This additional modernization need will be met with a combination of Repair and Maintenance and Building and Facility funds.

Eastern Regional Research Center (ERRC): In FY 1993, ARS completed the facility modernization study begun in FY 1992. The findings indicate that the utilities and building infrastructures have reached the end of their useful lives, and the facility itself has been overtaken by the evolution of codes, Agency criteria, and research needs over the past 50 years.

The proposed modernization program will occur in 9 phases with a total planning, design, and construction budget of \$39 million over 9 years.

In FY 1994, ARS funded design of Phase I (Service Building) and Phase II (Engineering Research Laboratory in Pilot Plant) with \$595,000 in Repair and Maintenance funds.

In FY 1995, ARS funded construction of Phase I, and design of Phases III through VII, using \$4,175,000 in Repair and Maintenance funds.

In FY 1996, ARS funded construction of Phase II using \$4,100,000 in Repair and Maintenance funds.

In FY 1997, \$4,700,000 is needed to fund construction of Phase III, leaving a balance of \$25,351,000 to complete modernization. This additional modernization need will be met with a combination of Repair and Maintenance and Building and Facility funds.

Western Regional Research Center (WRRC):

1. WRRC modernization includes the upgrade of outside utilities and complete renovation of the North Wing. The renovation includes asbestos and lead abatement, upgrade of existing HVAC system, laboratory reconfiguration to comply with safety and accessibility codes, replacement of all laboratory counters and tops, replacement of floor and windows, and completely patch, prime, and paint walls and ceilings as necessary. Total cost is \$28.5 million phased over a 7-year period.

2. The design is complete for all phases. Phases I and II were awarded in FY 1990 for \$5.9 million. Phase III was awarded in FY 1991 in the amount of \$3.4 million. Phase IV was awarded in FY 1993 in the amount of \$3.0 million. Phases V and VI were awarded in FY 1993 in the amount of \$4.4 million and \$3.2 million. Construction is expected to be complete by the third quarter of FY 1997.

3. Total construction funds committed to date for 6 phases - \$20.0 million.

4. Total funds of \$6.7 million will be required in FY 1997 to award Phase VII construction and A-E support services. In FY 1994 and FY 1995, \$1.161 million and \$.919 million was appropriated for construction of Phase VII. Fine-tuning of the design for Phase VII is necessary and will be complete in the third quarter of FY 1996. The Area will fund all necessary fine tuning costs. In FY 1997, additional funds in the amount of \$4.6 million will be required for Phase VII construction and A-E support services.

5. The Small Animal Facility (West Annex Building) planning, design, and construction is complete for Phase I. Design of Phases II and III was completed in the third quarter of FY 1994. The construction of Phases II and III was awarded in the fourth quarter of FY 1994. Construction is expected to be complete in the third quarter of FY 1996. The design and construction costs for all three phases is approximately \$5.0 million.

National Center for Agricultural Utilization Research (NCAUR):

1. The National Center for Agricultural Utilization Research is currently proceeding with a facilities upgrade design and construction program, as follows:

Phase IA - Utility Tunnel, Steam Lines, and Boiler: Construction contract was awarded in the fourth quarter of FY 1991. Construction was completed in the second quarter of FY 1995. Total project cost of \$2.5 million is for construction.

Phase IB - Electrical and Drain System Upgrade: Construction contract was awarded in the third quarter of FY 1992. Total cost of \$.9 million is for construction. Construction was completed in the first quarter of FY 1994.

Phase IID - Pilot Plant and Semi-Works Building Upgrades:

Total cost for design is \$1,825,000 which was appropriated in FY 1992. The design for Phase II was awarded in FY 1992 and is complete.

2. Appropriations to Date: FY 1992--\$1,825,000 Planning and Design for Phase II Pilot Plant

FY 1993--\$1,545,000 Planning and Design for Phase III Chemical Wing.

3. In FY 1996, only \$3.9 million was appropriated instead of \$11.7 million requested to implement modernization efforts. A revised phasing plan was necessary to renovate the Pilot Plant and Semi-Works Building. A phased renovation plan was developed in FY 1996 and recommended a three-phase renovation plan for the North Wing. The initial phase (Phase I of Phase IID) will renovate four modules of the Pilot Plant, add mechanical rooms and an exterior stairway. Estimated planning, design, and construction cost is \$5.4 million for this phase (escalated to 1997).

4. The remaining two phases are: Phase 2 of Phase IID: This phase will renovate adjoining areas in the North Wing. General laboratory, support space, and testing facilities will be provided to support the Pilot Plant modules. The Semi-Works Building will be renovated to support infrastructure of the Center. Phase 3 of Phase IID: This phase will renovate additional laboratory, support space, and testing facilities will be provided to support the Pilot Plant modules. Estimated planning, design, and construction cost of \$8.4 million (escalated to 1999).

5. Additional funding needed which has been escalated to the planned year of implementation is \$71.7 million. This will complete planned modernization efforts at the Center. This additional modernization need will be met with a combination of Repair and Maintenance and Building and Facility funds.

Question. Please provide the Committee with an update of the costs and projects completed and planned for the modernization of the Beltsville Agricultural Research Center.

Answer. Beltsville Agricultural Research Center (BARC):

Please refer to the attachment (5 sheets) for a listing of modernization projects at BARC from FY 1986 through FY 1996. The funding source for these projects was a combination of Renaissance 93 funds and Building and Facility Modernization funding.

The modernization of BARC facilities includes the revitalization of the Beltsville Human Nutrition Research Center (BHNRC). The new BHNRC will consist of a 70,000 gross square foot new facility on BARC-East near a current BHNRC building of 69,300 gross square feet which will be gutted and rebuilt. This new 139,300 gross square foot complex will include a modern human studies unit. The design will be conducted using FY 1997 funds.

To improve the overall animal related research, a study has been funded from FY 1994 funds to site new animal buildings and two new office/laboratories which will consolidate the Parasitology Unit, a portion of LPSI, with the existing LPSI complex. This will cluster similar types of research into one area, upgrade the animal facilities to meet animal care guidelines, and improve security for the animals. This will also reduce the overall gross square footage needed for the LPSI. This approach will provide increased research collaboration and savings through efficiency in operations.

The design of the Controlled Environmental Facility (CEF) is completed. Construction will be awarded in FY 1996. This will be used to consolidate growth chambers which are currently scattered in numerous locations including Headhouses, Greenhouses, and other miscellaneous structures. This consolidation will reduce staffing needs to monitor the chambers and maintain the plant material. This will also provide an environment where temperatures are controlled and the chambers will function more efficiently.

The remaining funds will be used to design upgrades for electrical, water, steam, sanitary and storm sewer, roads and grounds and telecommunications on portions of the east side of the center.

Beltsville Agricultural Research Center (BARC)
Modernization

Fiscal Year 1986

Computer Room Building 007	\$ 118,000
New Water Services	197,000
Stairwell Enclosures	148,000
Fire Escapes	298,000
HVAC Upgrades, Seven Buildings	255,000
Circle Drive	845,000
Replace Steam Line	525,000
Renovate Building 006 (NFMP*)	1,728,000
Miscellaneous Repair and Maintenance Projects	145,000
TOTAL	4,259,000

Fiscal Year 1987

Renovate Building 163F	\$571,000
Exterior Painting	159,000
Retrofit Steam Lines	881,000
Renovate Greenhouse, Range 2	484,000
Design Building 007	386,000
Asbestos Study	163,000
Log Lodge	583,000
Convert Building 1180 to Laboratory	219,000
Miscellaneous Projects	350,000
TOTAL	3,796,000

Fiscal Year 1988

Renovate Building 007 (NFMP*)	\$4,710,000
Design Building 003 (NFMP*)	400,000
Relocate Mail Room, Building 012	123,000
BARC Facility Study	1,000,000
Renovate Abattoir, Building 204	482,000
Renovate Building 303	575,000
Modify HVAC, Building 306	110,000
Bridge Repairs	320,000
Soil Conservation Service Road	1,752,000
Water Lines	1,150,000
Miscellaneous Projects, U.S. National Arboretum	153,000
Miscellaneous Projects, BARC (under \$100,000)	1,138,000
TOTAL	11,913,000

Fiscal Year 1989

Renovate Building 003 (NFMP*)	\$5,905,815
U.S. National Arboretum Roof Repairs	300,852
U.S. National Arboretum Greenhouse Electrical Repairs	273,200
Steam Lines, Phase IV	1,100,000
Oil to Gas Conversion	328,237
Renovate Building 203 (Boar Facility)	529,026
U.S. National Arboretum, Relocate Service Road	87,643
Hazardous Waste Marshalling Facilities	79,662
Waste Water Treatment Study	194,864
Renovate Building 204	354,335
Beltsville Area Security	91,806
Pesticide Handling Facilities	441,793
Swing Space	274,100
Miscellaneous Projects	1,680,612
TOTAL	11,641,945

Fiscal Year 1990

Steam Lines, Building 169-179	\$ 568,752
Steam Lines, Buildings 001-011A	1,407,084
Range 2 Modernization	690,574

Waste Water Treatment Facility	1,100,056
Electrical Distribution System	574,157
BARC Roads	361,027
Animal Parasitology Unit Planning	30,282
HVAC System, Building 050	44,598
Repair Embankment Failure	211,135
Powder Mill Road	1,547,588
Swing Space	103,685
Brooder House	40,847
Renovate Building 043, 046, 047	148,591
Annual Painting	200,098
Annual Roofing	247,582
U.S. National Arboretum Storage Building	90,402
U.S. National Arboretum Plastic Greenhouses (3)	235,687
Demolition of Facilities	27,985
Replace Chiller, Building 006	103,965
Renovate Building 209	71,693
Renovate Headhouse 16	35,124
Repairs Building 177B	12,465
Repairs Building 211	7,965
Renovate Building 1120	18,391
Elevator, Building 449/Gas Cyl	50,954
Renovate Building 449	4,865
Key Card Security Gate	37,002
Small Miscellaneous Projects	625,031
Repairs, Building	15,000
Contingency Steam Lines	297,170
Contingency	197,604
Replace Roof, Building 012	139,000
Contingency	7,706
TOTAL	9,254,065

Fiscal Year 1991

Small Animal Facility	\$128,192
Repair/Replace HVAC, Building 204B	65,418
Annual Painting	283,408
Annual Roof Repairs	276,908
Paving, Building 302	270,200
Replace Structural Defect, Building 254	7,369
Replace Roof Sow Pav., Building 208	55,050
Replace HVAC Equipment, Building 048	21,575
Replace HVAC Equipment, Building 009A	30,338
Replace Roof, Buildings 047A, 048, and 049	46,055
Replace Structural Defect, Building 160C	9,365
Waterproof Basement, Building 402	65,308
Repair Structural Damage, Building 228	15,758
Repair Structural Damage, Building 173	9,115
Repair Structural Damage, Building 217	33,750
Reskin Greenhouse, Building 008	33,031
Renovate Building 043, 046, 047	8,009
Sewage Disposal System	6,500
Architectural and Engineering Inspection Services	75,112
Renovate Swine Facility	80,851
Install Elevator, Building 005	197,625
Renovate Building 007	83,034
Miscellaneous	11,848
Renovate Building 003	6,572
Renovate Buildings 449 and 450	19,606
Swing Space	226,453
Addition, Building 426	57,000
Conference Room, Building 005	399,072
Electrical	255,980
Building 001	725,283
Plant Sciences Building	794,078
Free Stall Barn	149,187
Central Hay Storage	829,863

Repair Building 201	35,020
BARC-East Waste Water Treatment	729,662
Building 200 Modernization	55,233
Renovate Building 007	1,142,131
Study, Building 011A	125,000
Demolition	198,928
Minor Projects	235,239
Swing Space	478,481
TOTAL	8,276,607

Fiscal Year 1992

Install Filters on Spray Fields	\$ 65,132
Replace Roof, Building 002	245,466
Replace Roof, Building 014	154,000
Construct Addition to Building 426	465,004
Alterations, Building 426	96,625
BARC-East Water System Planning Study	110,008
Beltsville Human Nutrition Res. Cntr.	
Econ. Analysis	375,915
Infrastructure Planning Studies	93,969
Demolition of Facilities	142,628
Repair/Replace Parking Lots,	
Building 003 and 007	117,092
Contingencies for Unplanned Project	119,252
Telephone Cables	258,971
Renovate Building 002	132,000
Renovate Range 2 Greenhouse Complex	2,548,561
Repair/Replace Waste Water Treatment	
Facility	254,627
Dairy Research Facility	1,971,311
BARC-East Waste Water Treatment	5,010,993
TOTAL	12,161,554

Fiscal Year 1993

Range 2 Greenhouse Complex	\$7,400,000
BARC-West Waste Water Treatment Plant	4,300,000
BARC-East Water System	600,000
Controlled Environmental Chamber Facility	322,000
New Granary Economic Analysis	30,000
Office/Laboratory Economic Analysis	200,000
Animal Space Economic Analysis	100,000
Contingencies	548,000
Annual Demolition	150,000
Swing Space, Building 048, 049, and 050	350,000
Safety Corrections, Building 050	50,000
Modernization Office Salaries	160,000
BARC-West TSB Storage Low	500,000
Building 162, Modernization	93,000
Remove Dead Trees and Stumps	200,000
Replace Existing Manhole Covers	35,000
Repair and Paint Potable Towers	100,000
Repair Steam Tunnel Pump Station	25,000
Install Vinyl Siding, Building 204B	15,500
Replace Roof, Building 319	20,000
Replace/Resurface Floor, Building 204	60,000
Replace Floor and Paint Building 211	15,000
Replace Roof, Building 203C	167,500
Replace HVAC Chiller, Building 465	45,000
Replace Roof, Building 046 and 047	65,000
Contingencies	325,062
TOTAL	15,876,062

Fiscal Year 1994

Annual Demolition	\$ 150,000
Building 162 Modernization	620,000
Correct Ventilation problem Building 050	500,000

Modernize Building 001	9,700,000
Modernize East Potable Water System	9,400,000
Design New Animal Building	530,000
Upgrade West Electrical System	1,500,000
Design to Modernize Building 004	450,000
Replace Roof Building 203C	167,000
Remove UST's	450,000
Retest UST's	30,000
Modernization Office Salaries	160,000
Replace Existing Manhole Covers	35,000
Contingencies	308,000
TOTAL	22,000,000

Fiscal Year 1995

Modernize Building 004	\$3,960,000
Demolition of Buildings	177,212
Remove Underground Storage Tanks	1,389,689
Repair Bridges	125,309
Resurface Parking Lot Building 012	188,730
Modernize HVAC Building 211	45,181
Replace HVAC Building 318D	54,168
Install New Roof Building 288	34,820
Renovate Building 540	94,900
Purchase Emergency Generator Building 162	20,065
HVAC Building 050	34,135
TOTAL	6,124,209

Fiscal Year 1996

Construct Controlled Environment Facility \$	4,700,000
Design/Construct Infrastructure in 300 Area	2,000,000
Demolition of Buildings	626,000
Upgrade Telecommunications BARC East & West	150,000
Remove Underground Storage Tanks	15,000
Install GFCI Protection in Animal Areas	267,000
Contingencies	767,418
Replace CFC Refrigerants	100,000
Fire Protection Systems Upgrades	25,000
Renovate Building 056	232,600
Replace Roof on Building 010 Headhouse	250,000
Road Repairs	100,000
New Animal Building Design	258,000
Repair of Building 162	389,689
Cooling Tower for Building 004	125,000
TOTAL	10,005,707

TOTAL FOR FY 1986 THROUGH FY 1996	115,308,149
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Proposed Fiscal Year 1997

Design New BHNRC Building	\$1,700,000
Contingencies	1,630,000
Annual Demolition	250,000
Infrastructure BARC-East	1,400,000
Renovate Building 023	250,000
Replace CFC Refrigerants	200,000
Telecommunications BARC-East and West	200,000
Water Meters and Backflow Prevention	44,000
Renovate Building 281	222,600
Renovate Building 022	84,775
Road Repairs	250,000
Roof Repairs	150,000
TOTAL	6,381,375

Question. Please provide the Committee with costs and projects completed and planned for the modernization of the Plum Island Animal Disease Center.

Answer. Plum Island Animal Disease Center (PIADC):
Modernization projects at PIADC are as follows:

Fiscal Year 1992

Consolidation (C)	\$18,400,000
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Fiscal Year 1993

Underground Storage Tank Removal/ Replacement (C)	\$ 443,000
Wastewater Treatment Plant (C)	185,000
Boiler (Rental/C)	304,000
Incinerator Repair (C)	74,000
Environmental Assessment (S))	33,000
Chiller Plant (C)	1,400,000
Sludge Removal (C)	500,000
Miscellaneous Projects	784,000
TOTAL	3,723,000

Fiscal Year 1994

Wastewater Treatment Plant (C)	\$1,250,000
Miscellaneous Projects	741,250
TOTAL	1,991,250

Fiscal Year 1995

Above-Ground Fuel Tanks (Phase I) (C)	\$1,168,000
Miscellaneous Projects	747,000
TOTAL	1,915,000

Fiscal Year 1996

Upgrade Fire Alarm System B-101 (D/C)	\$1,000,000
Above-Ground Fuel Tanks (Phase 2) (C)	1,300,000
Wastewater Treatment Plant Closure (C)	2,000,000
Boiler Plant Design	500,000
PCB Transformer Replacement (D/C)	120,000
Miscellaneous Projects	750,000
Renovate B-102 (D)	250,000
DOE-National Renewable Energy Lab Support	280,000
Plum Island Harbor Repairs (D/C)	1,500,000
Replace Chiller Pumps (D/C)	500,000
TOTAL	8,200,000

Future modernization efforts at PIADC will address numerous infrastructure and physical plant repair and improvements. While the original modernization plan was estimated at \$81 million in FY 1995 dollars, inconsistent funding levels have resulted in a higher cost.

Question. Please provide the Committee with costs and projects completed and planned for the modernization of the Subtropical Agricultural Research Laboratory at Weslaco, Texas.

Answer. The Modernization Plan for the Subtropical Agricultural Research Laboratory in Weslaco, Texas established six phases for execution as listed below:

Phase 1: Planning and Design--This phase completed the Environmental Assessment for the entire modernization effort and initiated the Program of Requirements for Phases 2 and 3. Demolition of some existing dilapidated buildings was accomplished during this phase.

Construction Cost--\$93,000

Planning and Design Cost--\$322,000

Status--Design and construction was completed in the first quarter of FY 1996.

Phase 2: Site Preparation and Utility System Upgrade--Projects in this phase upgrade the water, sanitary, electrical, and storm drainage systems at the main laboratory campus. Recently acquired property is cleared of existing structures in preparation for a new laboratory facility to be constructed in Phase 3. Some grading and landscaping work is accomplished as well as construction of a new entrance road serving the site.

Construction Cost--\$1,278,000

Planning and Design Cost--\$69,800

Status--Design efforts for the Phase 2 projects are completed. Construction contract award is anticipated in July 1996.

Phase 3: Construct New Laboratory Facility, Building N-01--This phase constructs a new laboratory and office building of approximately 24,700 gross square feet. The new facility will house the Crop Quality and Fruit Insect Research Unit as well as the Laboratory Director and administrative support staff. Also included in this phase is renovation of two existing greenhouses and construction of four new greenhouses.

Construction Cost--\$6,773,000

Planning and Design Cost--\$570,400

- * Status--Design for the new laboratory is 35 percent completed with final turnover of the construction documents scheduled for January 1997. Design for the renovation of two greenhouses and construction of two greenhouses is completed. Design for the remaining two greenhouses has not started. The construction of these facilities is partially funded.

Phase 4: Construct Operations Support Facilities and Renovate Research Facilities--This phase constructs a pesticide storage and handling facility, farm implement storage facility, and a shipping and receiving facility. It includes renovation of the primary existing research building as well as headhouse and greenhouse space on the main research campus, Highway 83 site.

Construction Cost--\$4,290,300

Planning and Design Cost--\$377,200

Status--Design for the operations support facilities has been completed, construction is scheduled for FY 1998. The design for renovation of the research facilities is scheduled to begin in FY 1997 and award of a construction contract in FY 1998. These construction projects are not currently funded.

Phase 5: Renovation of Existing Laboratory Facilities--This phase renovates existing headhouse and laboratory space in Buildings 205, 221, 414, and 202 located at both the Highway 83 campus and the FM1015 site.

Construction Cost--\$2,890,400

Planning and Design Cost--\$218,300

Status--The design for renovation of these research facilities is scheduled to begin in FY 1998 and award of a construction contract in FY 1999. The design and construction of these projects is not currently funded.

Phase 6: Renovation of Existing Laboratory Facilities--This phase completes renovation of the existing laboratory facilities in Buildings 203 and 204 located at the Highway 83 campus. It also accomplishes demolition of existing facilities which have been retained as swing space during the modernization effort.

Construction Cost--\$3,218,900

Planning and Design Cost--\$328,100

Status--The design for renovation of these research facilities is scheduled to begin in FY 1998 and award of a construction contract in FY 1999. The design and construction of these projects is not currently funded.

The total estimated planned, design, and construction costs for the modernization at this facility is \$20.5 million.

Question. Of your total request of \$80.1 million for FY 1997, some \$51.8 million are being proposed to provide for the full construction costs of replacement laboratories at Parlier, California, and Ft. Pierce, Florida. Please explain the overriding need to accelerate the completion of the two laboratories.

Answer. Neither the Parlier, California, nor the Ft. Pierce, Florida, laboratory construction is being accelerated. The design activities for both facilities are on schedule to be completed in late FY 1996 or early FY 1997; therefore, the Administration is requesting full funding in FY 1997.

Question. The Committee directed ARS to reconsider the size, capacity, and mission of the Ft. Pierce Laboratory. Has this been incorporated into your request? How? How did your plans for the Ft. Pierce Laboratory change as a result of this project re-evaluation?

Answer. As directed by the House Committee on Appropriations in the FY 1996 Appropriation, ARS has looked at the research programs currently being conducted or proposed at the U.S. Horticultural Research Laboratory, Orlando, Florida; the Subtropical Horticultural Research Laboratory, Miami, Florida; and the U.S. Vegetable Laboratory, Charleston, South Carolina. This analysis determined that there was no duplication of current or planned research efforts at any of the locations investigated. Based on these findings, no significant change to the facility was implemented, other than the changes generally incorporated into a design as program needs are evaluated and refined.

Question. Given the number of ARS laboratories currently operating in Florida as well as other Federal laboratories in the State, why is ARS proposing to construct the Melaleuca Quarantine Laboratory in Ft. Lauderdale?

Answer. Originally the Army Corps of Engineers planned to construct this facility at Fort Lauderdale for use by ARS and cooperating scientists. The Executive Branch (OMB) determined that the facility should be part of the ARS budget.

There are several reasons why the new Quarantine Laboratory is needed in Fort Lauderdale. South Florida has a subtropical climate which is highly favorable for exotic (non-native) weeds to flourish. Three of the most noxious weed problems in the Southeastern United States, Melaleuca, Brazilian pepper, and Australian pine, are aggressively expanding in this region and threaten numerous natural areas, including Everglades National Park. The South Florida Ecosystem Task Force and the Governor's Commission for Sustainable South Florida have established eradication of exotic weeds as a high priority for ecosystem restoration and maintenance of Everglades National Park.

ARS in Fort Lauderdale has a central role in efforts to fight these weeds. The Fort Lauderdale group has a long track record of notable successes with biological control of noxious aquatic weeds. With the new facility in South Florida, the ARS research program can be expanded to target other noxious weeds, such as Brazilian pepper and Australian pine, in addition to Melaleuca. Work to be carried out in the new facility will benefit much of the coastal southeastern U.S., which is also susceptible to invasion by these noxious pest plants. Currently, the laboratory's quarantine facility is in Gainesville, where it is outmoded, small, difficult to use, and located miles away from a major airport. The lack of adequate quarantine capability limits the scope of the research program in Fort Lauderdale.

The proposed new Quarantine Laboratory will be located near the Miami International Airport.

Finally, the University of Florida has donated land sufficient for construction of the planned facility in Fort Lauderdale.

Question. Last year, the Committee appropriated \$1 million to ARS for the full construction costs of a new Rice Center at Stuttgart, Arkansas. What is the status of the construction of this new ARS facility? When will the laboratory be completed?

Answer. A contract was awarded for the construction of a new Rice Research Center at Stuttgart, Arkansas, to Flynnco, Inc., of

Little Rock in January 1996. Construction started on March 27, 1996. The construction is expected to be completed by October 1997.

Last year, the Committee appropriated \$1 million to ARS for repairs of facilities at the U.S. Grain Marketing Laboratory at Manhattan, Kansas.

Question. Please advise the Committee of the progress of these repairs.

Answer. A design contract was awarded in the first quarter of FY 1996 to validate a Facility Condition Study conducted on the main building in 1990. The initial investigative report proposes a four-phase construction plan. The design is expected to be completed by the second quarter of FY 1997.

Question. Explain the facility repairs undertaken with the \$1 million.

Answer. The Agency is planning to use the FY 1996 appropriation of \$1 million for the first phase of modernization to construct a mechanical room, cooling tower, and penthouse additions. This initial phase will start in the third quarter of FY 1997 and is necessary to support follow-on phases. The estimated construction cost, based on the March 1996 investigative report, for this phase is \$867,500 (escalated to 1997).

Question. What remaining repairs to existing facilities are needed and how much?

Answer. The remaining repairs at the Manhattan facility, based on the March 1996 investigative report, are as follows:

- Phase 2-- Renovate central systems and equipment (transformer, switchboard chillers, boilers, dust collection system, HVAC system). Estimated construction cost is \$1,816,800 (escalated to 1998).
- Phase 3-- Renovate laboratory space. Estimated construction cost is \$5,743,000 (escalated to 1999).
- Phase 4-- New roof and lightning protection system. Estimated construction cost is \$1,476,800 (escalated to 2000).

The total construction cost for all four phases is \$9.9 million.

The design is estimated to cost \$1.3 million. Total project cost is \$11.2 million.

According to your Explanatory Notes, construction of the U.S. Vegetable Laboratory at Charleston, South Carolina, and the Plant Stress and Water Conservation Laboratory at Lubbock, Texas, are still on hold until the projects are fully funded.

Question. How much funding is required to complete these facilities?

Answer. U.S. Vegetable Laboratory, Charleston, South Carolina--The construction of the Charleston facility is scheduled to occur in two phases. Phase 1 includes the office/laboratory complex, as well as headhouse space. Design for Phase 1 was completed in FY 1993 and an additional \$8,951,000 is needed in FY 1997 to begin construction. (\$9,453,000 was appropriated towards construction of Phase 1 in FY 1994, FY 1995, and FY 1996).

Phase 2 includes the balance of greenhouses and headhouses. In FY 1997, \$542,000 is needed to begin design, and design should be complete in one year. An additional \$6,230,000 would be needed in FY 1998 to begin construction.

Plant Stress and Water Conservation Laboratory, Lubbock, Texas--The design for a new Plant Stress and Water Conservation Laboratory at Lubbock, Texas, was completed in FY 1994. The estimated cost to fine tune the existing design documents and construct the new laboratory is \$14.9 million. After receipt of funds, the fine tuning, advertising, and award of a construction contract will take approximately 8 months.

Question. What is the timeframe established by ARS to complete construction of these laboratories?

Answer. U.S. Vegetable Laboratory, Charleston, South Carolina--Upon receipt of full construction funding, construction of Phase 1 is estimated to take 18 to 24 months to complete. Construction of Phase 2 is estimated at 12 to 15 months.

Plant Stress and Water Conservation Laboratory, Lubbock, Texas--Construction is expected to take 12 months.

Question. Please provide obligations to date and projected funding requirements for each major modernization project.

Answer. Obligations and projected funding requirements are as follows:

Modernization Location	Obligations to Date	Balance of Funding Required
California--Albany	\$38,270,227	\$ 4,600,000
Florida--Gainesville	2,104,000	5,900,000
Illinois--Peoria	4,780,600	71,831,000
Kansas--Manhattan	652,000	7,250,000
Louisiana--New Orleans	17,836,000	25,100,000
Maryland--Beltsville	73,072,837	106,000,000
Michigan--East Lansing	462,000	17,200,000
New York--Plum Island	15,829,000	74,200,000
Pennsylvania--Wyndmoor	4,870,000	30,100,000
Texas--Weslaco	4,409,000	14,700,000

The "Balance" represents remaining modernization project funding requirements that were either originally identified via facility condition studies, the development of Program of Requirement documents, or design drawings. Funding to date for these projects was either congressionally funded through the Agency's Buildings and Facilities account, or through the Agency's Annual Repair and Maintenance budget line item appropriation.

Question. Please provide obligations and projected funding requirements for each major new construction project.

Answer. Obligations and projected funding requirements for each major new construction project are as follows:

Construction Locations	Obligations to Date	Balance of Funding Required
California--Parlier	\$1,204,515	\$22,000,000
Florida--Ft. Lauderdale	43,000	4,000,000
Florida--Ft. Pierce	2,675,018	29,800,000
France--Montpellier	500,000	3,600,000
Georgia--Athens	321,463	4,800,000
South Carolina--Charleston	1,176,570	15,700,000
Texas--Lubbock	1,367,079	8,700,000

The "Balance of Funding Required" represents remaining construction project funding requirements that were either originally identified via the development of Program of Requirement documents, or design drawings. Funding to date for these projects was either congressionally funded through the Agency's Buildings and Facilities account, or through the Agency's Annual appropriation.

The Committee appropriated \$18.3 million to ARS for Repairs and Maintenance of Facilities in FY 1996.

Question. Were repair and maintenance funds used in FY 1995?

Answer. Yes. Repair and maintenance funds were used in FY 1995.

Question. Will these funds be used in FY 1996?

Answer. Yes. Funds in the amount of \$18.3 million are allocated for use in FY 1996.

Question. What are the planned use of these funds in FY 1997?

Answer. Some of the types of repair and maintenance projects anticipated in FY 1997 include: upgrades to building systems such as HVAC, plumbing, sewage lines, water treatment facilities, electrical, roof repairs, accessibility requirements, CFC, asbestos, and lead abatement, removal of storage tanks, correcting building, and life safety code deficiencies.

Question. The Budget Appendix reflects year--end 1995 unobligated balances of \$74 million for Building and Facilities. Identify these balances by project:

Answer. The unobligated balances for Buildings and Facilities as of March 31, 1996, are as follows:

Location	Balance
Arizona, Maricopa--Water Conservation Laboratory	\$ 396,000
Arkansas, Stuttgart--Rice Center	9,264,515
California, Albany--Western Regional Research Center	2,080,000
California, Parlier--Horticultural Crop Research Laboratory	4,055,485
California, Riverside--U.S. Salinity Laboratory	2,009,897
Colorado, Ft. Collins--National Seed Storage Laboratory	117,648
Florida, Ft. Pierce--Horticultural Laboratory	225,795
Florida, Ft. Pierce--Citrus Research Laboratory	2,900,000
Hurricane Andrew/Iniki--Florida, Hawaii, Louisiana	13,489,983
Georgia, Athens--Poultry Disease Laboratory	755,537
Illinois, Peoria--National Center for Agriculture Utilization Research	1,681,752
Iowa, Ames--Swine Center	2,907,658
Iowa, Ames--National Animal Disease Center	94,602
Kansas, Manhattan--Grain Marketing Research Laboratory	950,000

Location	Balance
Louisiana, New Orleans--Southern Regional Research Laboratory	\$ 5,751,278
Maryland, Beltsville--Modernization	3,263,873
Maryland, Beltsville--Modernization (GSA)	4,750,888
Massachusetts, Boston--Nutrition Center	33,031
Michigan, East Lansing--Regional Poultry Research Laboratory	2,327
Minnesota, Morris--Soil and Water Laboratory	59,146
Miscellaneous Facilities: Ft. Pierce, Florida	470,000
Nebraska, Clay--Meat Animal Research Center	2,655
New York, Greenport--PIADC	508,328
North Dakota, Fargo--Research Laboratory, North Dakota State University (NDSU)	383
North Dakota, Fargo--Greenhouse, NDSU	4,781
Oklahoma, Lane--Farm Experiment Station	231
Oklahoma, Lane--Agricultural Research Facility	46,217
Oklahoma, Woodward--Greenhouse	355
Oregon, Corvallis--Northwest Small Fruit Center	10,617
South Carolina, Charleston--Feasibility Study	635
South Carolina, Charleston--Construction Vegetable Laboratory	6,460,795
Texas, Lubbock--Plant Stress Laboratory	5,534,207
Texas, Lubbock--Cons Moisture Laboratory	1,714
Texas, Weslaco--Plan ARS Bee Laboratory	\$ 454,473
Texas, Weslaco--Southern Agricultural Research Center Modernization	3,809,865
Washington, Yakima--Vegetable Laboratory	16471
West Virginia--National Aquaculture Center	216,165
Wisconsin, Madison--Greenhouse	282,544
TOTAL	74,514,380

Question. For the past couple years, the President's budget has requested funds in this account to construct a new facility for the European Biological Control Laboratory in Montpellier, France. Appropriations were not provided as requested and I note that you have not made that request again for fiscal year 1997. Why aren't you seeking construction funds for this facility again this year? What has changed?

Answer. The agency is not seeking construction funds for the Biological Control Laboratory at Montpellier, France because of increasing research needs to complete the modernization of major agricultural research centers, such as the Beltsville Agricultural Research Center, the Plum Island Animal Disease Center, the

Subtropical Agricultural Research Laboratory, and regional utilization centers located at Albany, California; Peoria, Illinois; and Wyndmoor, Pennsylvania. Also, construction of new laboratories at Ft. Pierce, Florida and Parlier, California requires full construction funding in FY 1997.

Question. Please provide for the record a comparison of the FY 1997 budget requests for ARS, CSREES, ERS, and NASS to that submitted by the agency to the Department and the request submitted by the Department to the Office of Management and Budget.

Answer. A budget request for comparison of FY 1997 for ARS, CSREES, ERS, and NASS is as follows:

FY 1997 Budget Request

Agency	Agency Estimate	Department Estimate	OMB Allowance
ARS	\$768,955,000	\$731,768,000	\$726,353,000
Bldgs. & Fac.	111,750,000	77,600,000	80,100,000
CSREES	977,629,000	908,355,000	846,660,000
ERS	54,493,000	55,230,000	54,947,000
NASS	87,421,000 1/	86,857,000 1/	102,624,000 2/

1/ Does not include Census of Agriculture

2/ Includes Census of Agriculture

QUESTIONS SUBMITTED BY SENATOR GORTON

PEAS, LENTILS, AND LEGUMES

Question. The ARS maintains a small legume research program on the campus of Washington State University. This program provides needed research in the area of plant genetics, physiology, disease and insect resistance in peas, lentils, and chickpeas for the entire United States. In December of 1994, a member of this small team resigned leaving a big hole in this program. Could you update me on the status of this Grain Legume Genetics position at the USDA/ARS Grain Legume Genetics and Physiology Research Unit located at Washington State University. I would very much like to see this position filled in FY 1997.

Answer. Dr. Fred Muehlbauer is the ARS grain legume breeder in Pullman, Washington. ARS will continue to support the research program on peas and lentils within available resources and will work with the industry to identify new sources of funds to strengthen the program in the future.

Question. In my state of Washington peas, lentils, and chickpeas are an important rotation crop with wheat and barley. Unfortunately, these legumes are subject to a wide variety of plant and root diseases. Over the past several years, USDA/ARS has provided necessary research to help control these disease problems. The Cool Season Food Legume industry will lose to retirement the only two scientists working on plant and root diseases for peas, lentils, and chickpeas. In 1997, Plant pathologist Walt Kaiser has announced he will retire from his position at the plant introduction center at Washington State University. In 1998, Plant pathologist, John Kraft has announced he will retire from his position at the ARS facility in Prosser, Washington. Both of these individuals conduct national programs on pea, lentil, and chickpea diseases. Does the ARS plan to replace these positions as these fine scientists retire?

Answer. The vacancies created following the retirement of Drs. Kaiser and Kraft will be reviewed for replacement at that time. These positions will be given every consideration consistent with the needs of the Cool Season Food Legume industry, other national ARS priorities, and available resources at the time.

Question. The Cool Season Food Legume Research Program is funding scientists throughout the country in a team approach to solving the problems associated with legume production throughout the country. Could you comment on this program and the success of using a scientific team approach to problem solving.

Answer. ARS conducts research on peas, lentils, and legumes at 7 locations. The objectives of this research include solving problems of production and post-harvest issues of peas, lentils, and legumes. One of ARS' greatest strengths is the ability to manage and coordinate multidisciplinary scientific teams that solve nationally important agricultural problems in a timely and cost-effective manner. The program is managed and coordinated nationally in a multidisciplinary approach. Objectives of this research by location are provided for the record.

Albany, CA--Development of assays for pesticide residues on fresh peas, and genetic engineering of ethylene responses.

Charleston, SC--Development of legumes with increased resistance to nematodes and other soilborne pathogens; determination of allelopathic factors affecting weed control.

Fargo, ND--Characterization of internal chemistry of whitefly to determine their roles in predator/prey recognition and predator nutrition; identify and characterize genes controlling insect developments.

Fresno, CA--Plant germplasm acquisition, storage, regeneration, evaluation, documentation, and utilization.

Griffin, GA--Detection and elimination of viruses in legume germplasm; detection of resistance to viruses in legume germplasm.

Prosser, WA--Evaluation and enhancement of pea germplasm; identification of disease resistance; and computer modeling of conservation tillage-based production systems.

Pullman, WA--Identification of insect and disease resistance in dry peas and lentils; establishment of genetic linkage maps in lentils, dry peas, and chickpeas; development of improved varieties; development of integrated pest management systems; and maintenance of pea germplasm and pea genetic stocks.

Question. I am concerned about the proposed elimination of a small grains geneticist position at the USDA-ARS National Small Grains Germplasm Research Facility based in Aberdeen, Idaho. This research uses the latest molecular and DNA technology to improve both oat and barley genetics stocks. What are the ARS plans regarding Dr. David Hoffman's position at Aberdeen, Idaho?

Answer. This project and position are proposed for termination. The ARS plan to terminate Dr. Hoffman's research project was derived as a result of very careful and systematic review of all ARS research projects. During this review, we were required to propose the reallocation of resources associated with projects judged to be less critical compared to new program initiatives of greater national priority. If Dr. Hoffman's project is terminated as a result of the appropriation process, ARS will reassign Dr. Hoffman to another position in the Agency where his expertise will be applied to problems of higher national priority.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

TURFGRASS EVALUATION

Question. In your budget request you have proposed cancellation of funding for the National Turfgrass Evaluation Program (NTEP). Please explain why you are canceling funding for NTEP.

Answer. The NTEP is an industry activity that is partially supported by Federal funds. The ARS proposal to terminate this project was derived as a result of it being one of the 47 projects Agencywide judged to be less critical at this time, relative to the need to reallocate existing funds to finance some of the priority increase areas in the greater National interest and more appropriate for the Federal role. ARS is proposing to cancel the \$55,900 funding for the NTEP that was used formerly to support an ARS technician (now retired) and space charges for use of facilities at the Beltsville Agricultural Research Center. The NTEP now has the capacity to provide its own funding for the

facilities used at Beltsville, approximately \$35,000. ARS is not asking the NTEP to leave the Beltsville facility, only to assume the full cost of operating its program. ARS is not severing its ties with the turfgrass industry.

Question. What basis did you use in determining which programs should receive no funding?

Answer. ARS evaluated all research projects for relevance, capacity, and impact. The NTEP was determined not to be highly relevant to the ARS mission now that the turf industry is very large and self-supporting. In addition, the ARS funding (\$55,900) was determined insignificant to the NTEP overall program and had little impact on the survival of the NTEP turf industry, which describes itself as valued at \$30-35 billion.

Question. Is funding available to NTEP through any other program or funding source within the Department?

Answer. No, funding is not available through any other program or funding source within the Department.

PRECISION AGRICULTURE

Question. What role if any do you see for the Department as it relates to site-specific farming and precision agriculture?

Answer. USDA has commissioned a National Research Council (NRC) study on this subject. Their report is due in the fall of 1996. Therefore, the following answers are preliminary, pending receipt, study, and USDA analysis of the NRC report.

The adoption of precision farming appears to offer both challenges and opportunities with respect to improving agricultural management decisions that are based on site-specific management of components of fields rather than the average conditions of whole fields. USDA has the continuing responsibility to provide science-based knowledge on how to make agricultural management decisions.

Question. Do you see a need for additional research in this area?

Answer. USDA sees a need for additional research in a whole-farm systems context, particularly with regard to interactions between various inputs, farming operations, etc. The advent of precision farming as an agricultural system amplifies this need.

Question. Do you see a role for USDA in looking at how such technology could be utilized by farmers regardless of how large or small they may be?

Answer. This is a specific question that USDA has asked the NRC to address by involving social scientists and economists in their study. As a preliminary response to the question, USDA feels that various approaches to the implementation of precision farming should be studied. Some of the individual component technologies of precision farming are relatively inexpensive compared to many input and equipment costs. Some early-adopter farmers are now approaching precision farming a step at a time or adopting only those components that they are sure are economically viable. Late-adopters may need sound cost-benefit analyses to help them determine what level of precision farming is appropriate to the size of the farming operation.

Question. Does USDA see this as moving agriculture into the new information age?

Answer. Full adoption of precision farming can produce and require large quantities of field crop condition and performance data and opens the door to a potential for optimizing agricultural management decisions at a sub-field scale. The experience of precision farm operators already bears out the contention that farming is more than ever becoming reliant on large amounts of information of many kinds.

Question. If so how do we explain and orientate producers on the benefits of such information?

Answer. The desired level of involvement of USDA in orientation of farmers regarding information benefits related to precision farming is not well-known at this time. The private sector is currently carrying that burden in many respects. There has been some indication from farmers that they do not wish to be

entirely reliant on technology from industry, but that they want to be supplied with certain kinds of information, particularly on inputs, by unbiased public sector research. Concurrent with the advent of precision farming is the communication opportunity of the Internet. USDA is already investigating the provision of decision support tools and consultation regarding use of those tools via the Internet. Development of successful Internet approaches to delivery and support may lead to commercializable technologies that could be taken over by the private sector, if that is desirable. By commercializable technology, we mean software delivery and support of which can be sold over the Internet. One example of a decision support tool that is already being used is a cotton production management computer model. This model helps producers decide when to irrigate, fertilize, and defoliate. ARS is currently working under a CRADA with a private company to make the model and all its support needs, such as manuals, one-on-one consultation, and databases available over the Internet. If successful in development of the technology that delivers and supports the model, the private company will use it and will charge producers for use of the model and for its Internet support services.

QUESTIONS SUBMITTED BY SENATOR BURNS

KARNAL BUNT

The following questions deal with the issue of Karnal Bunt:

Question. Please describe the long term commitment by ARS to conduct research on the biology and management of Karnal bunt disease.

Answer. ARS has been involved in research on the detection and identification of the Karnal bunt fungus since 1982 at the ARS containment facility at Frederick, Maryland. ARS has also conducted cooperative research on disease control and pathogen biology in India and Mexico, where the disease is endemic. ARS will enhance its research program on Karnal bunt in FY 1996 with a release of \$200,000 from the Administrator's contingency fund. The Agency will request emergency funding in FY 1997 and a permanent increase in base funds in the FY 1998 budget to research issues critical to solving the Karnal bunt crisis.

Question. What is the commitment of ARS to study the survival of Karnal bunt in cold climates such as Montana's?

Answer. The survival of Karnal bunt in cold climates is one part of a larger study to determine the climatological and geographical factors that limit Karnal bunt distribution. ARS plans to conduct such research.

Question. What is the commitment of ARS to study control methods for Karnal bunt, either cultural, chemical or biological?

Answer. ARS recognizes the need for control methods for Karnal bunt, should the disease become established in the United States. Accordingly, ARS is accelerating its research on Karnal bunt with \$200,000 released from the Administrator's contingency fund in FY 1996. The Agency will request emergency funds in FY 1997 and a permanent increase in base funds in FY 1998 to expand its research on Karnal bunt.

MONTANA

The following questions deal with the transfer of all the personnel from Bozeman to Sidney. With all the work that you have put into funding the Bioscience Center in Bozeman it really seems like the administration is taking advantage and working against the land grant institution in Montana.

The proposed elimination of the Agricultural Research Service at Montana State University, our Land Grant University in Bozeman, and relocation of researchers and research responsibilities to Sidney are causing considerable turmoil within our agricultural community and concern throughout Montana.

There are many questions surrounding the ARS decision. Extremely limited input by and discussion with the Montana agricultural industry, the communities involved and the State has been sought.

Question. Dr. Horn, have you seen the letter from Governor Racicot of Montana to Secretary Glickman, regarding the move of the Bozeman research unit to Sidney?

Answer. Yes, I have seen the letter from Governor Racicot.

Question. With that in mind, what is your process for making decisions regarding closure of research locations and from whom do you solicit input?

Answer. Last year, ARS proposed closing twelve locations as part of the FY 1996 budget. One of the locations was Sidney, MT. Last year as Acting Under Secretary, I testified that if Congress restored funding for those locations, I would attempt to increase the research effort at those locations. The current proposal to transfer the research programs at Bozeman, MT, to Sidney, outside the budget process, is my approach to carry out that commitment. The ARS Administrator's Council, comprised of senior program and management officials, as well as the 8 area Directors provided input on this matter.

Question. Will ARS research conducted out of the Sidney Center for Excellence be accomplished in cooperation with Montana producers in central and western Montana?

Answer. Yes, the purpose of transferring the Bozeman programs to Sidney is to strengthen the programs and to provide better information and technology to our customers throughout Montana and elsewhere in the Northern Great Plains. We have an active customer focus group that meets on a regular basis with our Sidney researchers. We have already started the process of expanding the focus group to include producers in central and western Montana and adjacent States.

Question. What is the long-term commitment of ARS to maintain an effective research presence at the Sidney Center for Montana and Regional Agricultural interests?

Answer. ARS is committed to maintaining an effective research presence in Montana. The purpose of consolidating the Bozeman and Sidney programs is to place ARS research programs in Montana in a stronger position to serve our customers and in a much stronger and defensible position to withstand the downsizing of government.

Question. Dr. Horn. Why would you move a group of scientists off of a land-grant university campus where on-going collaborations with state agricultural experiment station researchers and university scientists lead to the whole research program being greater than the sum of the parts to a more isolated research station that is located more than 400 miles from the nearest land grant university?

Answer. The purpose of consolidating our programs at Sidney is to strengthen our research programs and provide better information and technology to our customers throughout Montana and elsewhere in the Northern Great Plains. The proposed consolidation will preserve the high priority research of our current programs. The transfer will place our research programs in a much stronger and defensible position to proceed and to cooperate with MSU, other existing ARS programs, private sector, and university research partners. We have several MSU scientists located in our Sidney facility and the research consolidation at Sidney will further strengthen cooperative research efforts with scientists at Bozeman. We also have strong collaborative efforts with scientists around the world. Technology improvements continue to enhance our ability to collaborate with scientists globally. Our intention is to maintain and strengthen our cooperative research efforts with our partners at MSU.

Question. Why would USDA/ARS spend additional dollars to build a new facility or expand existing facilities when there already appears to be facilities in place, which ARS has access to in existence?

Answer. Montana State University has requested ARS to remove the facility that houses the Range Insect Control research program by January 1, 1997 to provide space for the new Bioscience Building which will be built on campus. Space is currently available at the Sidney facility to house the Range Weeds research program.

Question. I would like to see the justifications for the move from Bozeman to Sidney.

Answer. Due to budget constraints, we are required to continually look for opportunities to consolidate research programs to achieve savings in overhead and research effectiveness. The purpose of consolidating our programs at Sidney is to strengthen our research program at Sidney and provide better information and technology to our customers throughout Montana and elsewhere in the Northern Great Plains. The consolidation will preserve the high priority research of current programs and allow for the development of an integrated crop and pest management program. This transfer will also place our research programs in a much stronger and more defensible position to proceed and to cooperate with other existing ARS, private sector and university research partners.

Question. Could you show how the move from Bozeman to Sidney will save money?

Answer. Annual savings of \$65,000 overhead costs which includes rent for office, greenhouse, storage space, network charges, phone and recharge fees will be saved by moving to government owned facilities. Also, annual savings of \$50,000 in administrative support will be saved by consolidating the programs at Sidney.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

DETAILED STAFF POSITIONS

I understand that during the House Appropriations hearings, an issue was raised regarding staff positions that have been detailed from agencies under your jurisdiction to serve within your own office. I thought a major theme of USDA's restructuring was to decentralize administrative positions rather than to concentrate them at higher levels. I am sure each of the individual agencies could fully utilize these staff positions within their respective offices.

I further understand plans are underway to consolidate the budget office process by creating a new budget coordinator within your office.

Question. How many detailees have been assigned to your office over each of the past five years?

Answer. The following table lists the employees detailed to the Assistant or Under Secretary's Office from FY 1991 through FY 1996. As noted in the table, there were a total of 22 detailees to the Assistant or Under Secretary's Office during the past five years. While we have strived to make this a comprehensive listing, no formal personnel actions are processed for details and, consequently, no data base exists to retrieve this information.

OFFICE OF THE UNDER SECRETARY FOR RESEARCH, EDUCATION, AND ECONOMICS

Name	Title	Duration
Kevin Barnes	Agricultural Statistician	9/95 to 11/95
Dennis Childs	Staff Scientist	1/95 to 6/96
Millie Evano	Secretary	10/94 to 4/95
Sam Evans	Supervisory Economist	7/93 to 1/95
Mitch Geasler	Special Assistant	1/96 to Present
Joe Glauber	Senior Economist	1/93 to 8/95

Mildred Guard	Secretary	1/95 to 6/95
Hubert Hamer	Survey Statistician	1/94 to 4/94
Deborah Hanfman	Information Specialist	1/96 to Present
Gene Hasha	Agricultural Economist	7/93 to 1/95
Kelly Hauhn	Secretary	6/94 to 1/95
Kelly Hauhn	Secretary	3/96 to Present
Mary Beth Hauhn	Secretary	5/94 to 11/94
Maureen Kelly	Legislative Coordinator, REE	11/95 to Present
Eleanor Lanier	Secretary	11/94 to 1/95
Sara Mazie	Budget Coordinator, REE	5/96 to Present
Nora McCann	Secretary	1/95 to 3/95
Barbara Meister	Confidential Assistant	8/95 to Present
Theresa Neal	Secretary	3/95 to 12/95
Debra Reed	Program Analyst	7/95 to 10/95
C. Steve Teasley	Communications Coord., REE	1/96 to Present
Kyra Toland	Secretary	12/95 to 3/96

Question. What will be the effect of consolidating the budget process on the ability of each agency to construct its own budget priorities? How will the process change from the one currently in place?

Answer. The reorganization of the Department of Agriculture has as one of its major goals an increase in accountability for each Under Secretary for program management. The REE Budget Coordinator position is designed to identify and create a framework for efficiencies and synergies in program activities between agencies within the REE mission area, while preserving the ability of the agencies to conduct budget planning and prioritization activities for each agency. The Department highly encouraged consolidation of functions within mission areas functions to replace individual agency units. In REE, we have chosen to do so in the areas of public affairs, legislative affairs, administration and financial management and budget. Mission area functions, where one unit serves all four agencies and the office of the Under Secretary, were created for administration, financial management, and legislative affairs. Coordinator positions, which preserve the autonomy of the agencies, were created for the communications and budget functions. These coordinator positions provide internal Department efficiencies while allowing the Under Secretary to appropriately oversee the programs of the four agencies.

We expect the major impetus for change in the USDA budget process to be the Department's effort to comply with the Government Performance and Results Act of 1993. The Budget Coordinator will have primary responsibility for working with the four agencies on their FY 1998 budget submissions to the Office of Management and Budget to ensure compliance with GPRA and the REE Strategic Plan which is in development using GPRA principles.

STUTT GART NATIONAL AQUACULTURE RESEARCH CENTER STAFFING

Last year, this Subcommittee provided funding for the Stuttgart Aquaculture facility which had previously been appropriated through the Interior Subcommittee. Additionally, the recently passed farm bill renamed the facility the Stuttgart National Aquaculture Research Center and reconfirmed the transfer of the Center's functions from the Department of Interior to USDA.

Warm water aquaculture has already made a dramatic impact on farm diversification, rural economic development, and the diets of many Americans. In Senator Cochran's and my part of the country, aquaculture has been a very bright spot on the horizon and I am

sure you would agree we have a long way to go in the area of research for this growing industry.

As I know you are aware, the facility at Stuttgart is well positioned to support our overall needs for research. Of course, adequate levels of staffing are critical to assure the most efficient use of our research infrastructure. I am aware that the Stuttgart Center is in need of additional support in the areas of therapeutic evaluation, fish health management, and aquaculture engineering. I hope that ways can be found to provide these important increases in a way that will not detract from other important research activities for aquaculture.

Question. Can you provide us an update on the status of the transfer of the Stuttgart Center from Interior to USDA?

Answer. USDA and Interior have designated an official from each agency to lead the transfer process. Appropriate staff support in real property, personal property, and other administrative matters are being identified and preliminary discussion on requirements of the transfer have been initiated.

Question. Do you agree with the importance of providing increases for aquaculture research?

Answer. Yes, ARS supports increases in aquaculture research. Aquaculture is growing faster than other areas of agriculture in the United States. Research contributing to enhanced production efficiency and economic competitiveness would place aquaculture in position to supply U.S. consumers with an alternative source of seafood, as the ocean wild-catch declines.

Question. Are you aware of the staffing needs at Stuttgart and do you agree these increases would be beneficial to the entire industry?

Answer. Yes, ARS has defined staffing needs and program areas to address national problems, so that benefits would accrue to the entire aquaculture industry.

RICE GERmplasm RESEARCH

Dr. Horn, I am pleased you were able to join me in the recent ground breaking for the Rice Germplasm Laboratory near Stuttgart, Arkansas. I have worked for several years to make this facility a reality and I look forward to the accomplishments it will bring to the rice industry.

Question. Can you provide your thoughts on how best to proceed with research initiatives that will make best use of this facility?

Answer. We share your excitement and commitment to making this new facility the focal point of our national rice research program. We see this as a time of scientific opportunity. We plan to utilize the powerful new technologies of molecular biology and cereal chemistry to add value to rice production by designing rice plants for specific uses. Beyond this, we will utilize physiological/biochemical genetics to improve existing varieties and develop new varieties with resistance to diseases and pests and with better grain quality.

ARS GENERAL WORKFORCE

Question. Can you provide information regarding the current size of the ARS scientific workforce?

Answer. ARS currently employs 1,855 permanent career research scientists.

Question. How do the numbers today compare with five years ago? Ten years ago?

Answer. The current number of scientific researchers is 25 percent lower than the number employed at the end of fiscal year 1986--2470. ARS employed 2,134 research scientists at the end of fiscal 1991--13 percent more than are currently employed.

Question. Can you explain how you view the changes in the new farm bill will affect your staff level needs?

Answer. We do not anticipate any staffing changes as a direct result of the new farm bill. Any future staff changes will

be made as a result of changing research priorities and available funding. Any staffing requirements related to the transfer of research facilities from the Department of Interior at Marion, Alabama, and Stuttgart, Arkansas, will be absorbed within existing agency FTE allocations.

ARKANSAS CHILDREN'S HOSPITAL

I am pleased to know that human nutrition will be a major area of emphasis for ARS. I am also pleased that ARS continues to work closely with, and to incorporate the Arkansas Children's Hospital Nutrition Research Center as part of the overall effort.

Question. Can you describe how ARS intends to move forward in the area of human nutrition research?

Answer. The ARS is moving forward in human nutrition research at six research centers. The national thrusts of the research goals are to:

Reduce health care costs and enhance the quality of life by defining the relationship between diet, inheritance, and lifestyle and the risk of chronic diseases, such as obesity, diabetes, cardiovascular disease and cancer.

Improve the scientific basis for more effective federal food assistance programs by monitoring food and nutrient consumption and identifying socio-economic, cultural, and environmental forces that influence eating habits.

Generate a more nutritious food supply by conducting research that defines the basis for modifying the health promoting properties of plant and animal foods.

Improve the resistance to acute infections and immune disorders by investigating the interaction between nutrition and immune function.

Enhance the capacity to promote changes in diet habits by basic research of neural processes, memory and learning, appetite regulation, and physiological factors influencing food habits.

Individualize dietary guidance for nutritionally-vulnerable groups within the U.S. (i.e. infants, children, pregnant and lactating women, and the elderly) by determining how nutritional quality at critical points throughout the life span affects development and risk of disease.

Question. What will be the budget implications of this emphasis in nutrition research?

Answer. Current ARS funding support for human nutrition research totals about \$64 million and there are opportunities for additional modest investments to bring the Human Nutrition Centers to full capacity. The return on this investment would be rich and includes improved quality of life with reduced health care costs. The promise for health benefits and disease prevention as the result of nutrition research is beginning to be realized. But, despite our ability to reduce health care costs through changes in dietary habits, our national investment in human nutrition research has stagnated in real dollars since the early 1980s.

Question. What levels of funding would be required for the Arkansas Children's Hospital Nutrition Research Center to gain parity with other centers as they are maintained currently?

Answer. To achieve parity with the current funding of other centers, approximately \$5 million additional funding would be required at the Arkansas facility at this time.

ARS FACILITY CLOSURES

ARS facility closures continue to be an area of great interest to this Subcommittee and to the Senate generally. The new farm bill authorizes a task force to develop a comprehensive plan for the development and consolidation of federally supported agricultural research facilities.

Question. How will this task force affect your decisions on facility closures that we may be asked to act upon in this Subcommittee?

Answer. The task force will provide recommendations to the Administration on the future utilization of all research facilities funded with Federal funds. The administration may use the recommendations in plans that will be submitted to the Congress for review and concurrence.

Question. Can we assume this task force will be more than just a "closure study commission" and also provide us with information related to enhanced research capabilities?

Answer. Yes, we expect the task force to provide recommendations on what facilities will be required to conduct research programs needed in the 21st century to sustain food and fiber production for the United States. While we envision that some facility closures may be among the recommendations of the task force, we also expect consolidations, modernizations, and new construction to be among the priorities identified.

QUESTIONS SUBMITTED BY SENATOR KERREY

ANIMAL GENOME MAPS

Question. In the proposed budget increases for ARS, have you proposed funding to support databases for animal genome maps? If so, what is the proposed level of funding? And where would these databases be located?

Answer. ARS has proposed support to animal genome map databases in the FY 97 budget. The proposed level of funding would be \$300,000. The database hub would likely be located at the National Agricultural Library (NAL), but would be allocated as a separate item in the budget for the Clay Center, NE programs and administered by ARS personnel from Clay Center to ensure coordination with the existing ARS database for livestock.

Question. At Clay Center, Nebraska, livestock genome maps are already on the World Wide Web. My understanding is that these databases at Clay Center are already accessible to industry and universities, and anyone else who is interested. Is that correct? If so, and if you are proposing to locate databases elsewhere, that sounds duplicative to me. Why would you want to duplicate this activity that is currently in place at Clay Center?

Answer. ARS scientists at Clay Center have the world's most complete genetic linkage maps for cattle and swine and will soon have a similar linkage map for sheep. These Clay Center linkage maps have integrated available markers from primary sources world wide. These linkage maps for cattle, swine and sheep at Clay Center will continue to be accessible to other users. Efforts are underway to improve access and ease of use of these livestock linkage maps. There is also a genetic map for poultry. To advance science and technology development it is necessary to have a database hub to direct queries to appropriate sources and to facilitate access. This central database hub would serve as the focal point for not only the livestock linkage maps at Clay Center and the poultry maps, but also cytological, physical radiation hybrid and Yeast Artificial Chromosome (YAC) contig maps wherever they are located. Since each of these maps are dynamic, it is not desirable to periodically move or dump the data to one central source. Combining databases in many instances decreases the resolution and increases inconsistency of the maps. It is however, necessary to have a central database hub that contains certain map information and the necessary information to direct a query to the appropriate dynamic database(s).

Question. How much additional funding over the next five years do you estimate would be required under your present plan for animal genome databases at the National Agricultural Library?

Answer. Based on present information and the planned approach, the total ARS funding for an effective central database hub, contributing databases at ARS locations, and contributing databases at university locations, should not exceed \$1,000,000 over the next 5 years. Resources beyond this level could be

provided by industry, state universities, and users from other countries.

FOOD SAFETY

You are requesting a program increase in FY 1997 of \$7.5 million for food safety.

Question. How much of this request is designated specifically for cattle, sheep, and swine programs?

Answer. The requested FY 1997 food safety program increase of \$4.9 million is designated specifically for pre- and post-harvest cattle, sheep and swine programs.

Question. Where would this livestock research be conducted?

Answer. This livestock research would be conducted at Albany, CA; Ames, IA; Beltsville, MD; Clay Center, NE; and Philadelphia, PA.

Question. How much of the \$7.5 million increase for food safety is designated for technology to be used on farms and ranches?

Answer. Of the total requested \$7.5 million food safety increase, \$2.35 million is designated for animal production food safety, and thus for technology for use on farms and ranches.

WASTE UTILIZATION MANAGEMENT

Question. How much of the \$2.0 million increase for improved waste utilization management is focused on beef cattle feedlots?

Answer. ARS has proposed that \$800,000 be appropriated for improving waste utilization management on beef cattle feedlots.

Question. Where would this research be conducted?

Answer. ARS would conduct waste utilization management for beef cattle feedlots research at Clay Center, Nebraska and Bushland, Texas.

FORAGE BREEDING

Question. I am concerned that elimination of ARS funding for forage breeding at the University of Nebraska will have a detrimental effect on the livestock industry. Do you envision this research being continued with other sources of funding, or do you envision this research being totally terminated?

Answer. ARS proposes to redirect the present research and add funds to enhance total forage grass production that is suitable for livestock utilization as well as a source of biomass energy.

Question. If it is terminated, what will the impact be on the livestock and other industries that may depend on improved forage varieties?

Answer. If the program is terminated, the impact is likely to be minimal, because the research in this area will continue with additional new benefits for biomass production for energy to be realized sooner.

QUESTION SUBMITTED BY SENATOR KOHL

ANIMAL WELFARE INFO CENTER (AWIC)

Dr. Horn, Since its founding in 1986, the Animal Welfare Information Center (AWIC) has been a resident of the U.S. Department of Agriculture's National Agricultural Library (NAL). By law, functions of AWIC include providing information that can be used for training animal researchers about more humane animal care and use, and improving methods of animal experimentation, which can reduce or replace animal use or minimize pain or distress to the animals.

In the past, Congress has appropriated funds for AWIC. However, there have been concerns that not all the funds have

[been] used for the AWIC, and that some of the funds have been used by the NAL more generally.

Question. In that context, if Congress were to appropriate funds in FY 1997 for the AWIC, would you agree that those funds should be used for AWIC exclusively, and not diverted to other NAL functions?

Answer. Yes, any funds appropriated for AWIC will be used to support this function. In 1986, Congress appropriated funds to the Animal and Plant Health Inspection Service (APHIS) to be transferred to NAL for an "information service." These funds became part of the NAL base budget in FY 1989. AWIC is the most visible component of NAL's animal welfare program effort, but it is only part of a total complement of information services and products provided by NAL in support of animal welfare. As a wholly integrated information resource, NAL uses appropriated funds for animal welfare to: purchase journals and monographs; catalog, abstract, and index purchased materials; provide document delivery services; and help support the development and maintenance of systems that provide animal welfare information, such as ISIS, AGRICOLA, and other electronic resources such as the Internet and the World Wide Web. These efforts enable AWIC to be accessible worldwide. Monies are also used to help support a portion of NAL's infrastructure costs but this assessment is no greater for AWIC than for other NAL programs.

QUESTIONS SUBMITTED BY SENATOR BYRD

NATIONAL CENTER FOR COOL AND COLDWATER AQUACULTURE

I am advised that experts are projecting the need for aquaculture-raised fish to expand five to seven times (from 5 million pounds to 2-3 billion pounds) within the next two decades. I am further advised that the United States is the second largest fish and seafood market in the world, yet the U.S. is only tenth in production.

In 1991, this Committee initiated a study within the Agricultural Research Service (ARS) for a coldwater aquaculture center in Appalachia to ensure adequate resources were available to address the growing aquaculture demand. In FY 1995, ARS was provided with \$1.9 million to design and purchase land for a coldwater center. Recently, I understand that ARS has reached a tentative agreement for a land transfer from the U.S. Department of Interior for the Center.

Question. What action is ARS currently taking to hasten progress on the Center?

Answer. ARS Facilities Engineering Branch is initiating a study by an engineering consultant firm to identify the best building site available for the ARS National Center for Cool and Coldwater Aquaculture at the United States Department of Interior (USDI) National Biological Service's, Leetown Science Center. This study also will develop the additional information needed to prepare an environmental assessment for the construction project. Concurrently, the ARS Facilities Division is preparing a solicitation for a Request for Proposals for an architectural/engineering firm to prepare a design for the ARS office/laboratory building, and the wet laboratory facility. In March 1996, ARS conducted a research planning workshop that has laid out the research program areas that will be required by the architectural/engineering firm to design a facility that will support the research program.

Question. Please provide a progress report on the negotiations with the Interior Department.

Answer. ARS has had discussions with USDI National Biological Service (NBS) about sharing resources at the Leetown Science Center in Leetown, West Virginia. The NBS Director, H. Ronald Pulliam, has written to ARS Administrator, Dr. Floyd P. Horn, stating his interests in having the ARS National Center for

Cool and Coldwater Aquaculture located next to the Leetown Science Center, and developing a partnership between ARS and NBS. He stated that the Leetown Science Center has ample land and adequate water supply to meet the needs of both agencies. Dr. Horn has responded that such a collocation would foster an effective partnership allowing each agency to serve more efficiently the needs of their respective clients. The Associate Director of the North Atlantic Area of ARS, the Director of the NBS Eastern Region, and the Center Director of the NBS Leetown Science Center have met on several occasions and have reached a tentative agreement on two potential sites for the ARS office/laboratory and wet laboratory facility, and sharing of the water resources available to the Leetown Science Center, and improvements or modifications to existing facilities, such as the water degasser that would be required to meet the needs of both agencies. A draft Memorandum of Understanding is being prepared by ARS and will be provided for review by NBS during May.

Question. With the anticipated transfer of land at possibly no cost to the Department, what is the projected need for funds in FY 1997 for the Center?

Answer. In FY 1995, \$1,925,000 was appropriated to purchase land and design the facility for the National Center for Cool and Coldwater Aquaculture. Since land will not be purchased for the National Center, the entire amount is available for facility design and the studies required for the environmental assessment. ARS Facilities Engineering Branch has estimated that the office/laboratory facility and the wet lab facility will cost \$12,000,000 for design and construction. Therefore, we estimate that an additional \$10,075,000 appropriation will be needed for construction of the facility, purchase and installation of special equipment needed by the wet lab, and to make modification and improvement to NBS infrastructure, so that it can accommodate the ARS program.

Question. FY 1998?

Answer. ARS estimates that the program of the National Center for Cool and Coldwater Aquaculture will require a \$4,000,000 annual appropriation. When program funds are available, we will begin to obtain equipment to outfit the laboratories and offices. We hope to begin recruiting some scientific and support staff before the facilities construction is completed. The National Biological Service has agreed to provide ARS office and laboratory space. The need for resources to support research on a phased-in basis will occur beginning in FY 1998 at the level of \$400,000 per scientist-year of activity.

Question. When does the agency anticipate the center being fully operational?

Answer. In ARS, design of major facilities typically requires a year. The solicitation for a Request for Proposals for an architectural/engineering firm to prepare a design for the ARS office/laboratory building, and the wet laboratory facility is being prepared at this time. We anticipate that a contract to design the facility will be awarded in the first quarter of FY 1997. Thus, assuming that construction funds are available, a construction contract could be bid and awarded in the second quarter of FY 1998. In ARS, it typically has required 18 months from breaking ground to occupancy of a newly constructed facility. If the construction contract is awarded in the second quarter of FY 1998, the facility should be ready for occupancy in the fourth quarter of FY 1999. We anticipate that the National Center for Cool and Coldwater Aquaculture would be fully operational in the second quarter of FY 2000.

APPALACHIAN SOIL AND WATER CONSERVATION LABORATORY

Question. Please identify current research projects of the ARS laboratory at Beckley, West Virginia, including funding and scientific support for each project.

Answer. Current research at Beckley is organized under the following projects:

<u>Project Title</u>	<u>Scientists</u>	<u>Funding</u>
Alleviation of Acid Soil Constraints to Plant Growth	2.3	\$896,400
Selection and Improvement of Plants for Infertile Acid Soils	3.2	812,900
Acid Soils	0.1	447,200
Livestock Grazing Systems and Water Quality in Appalachia	2.4	663,500
Management and Ecology of Pastures in the Appalachian Region	2.1	680,500
Forage Legume Breeding for the Appalachian Region	1.0	356,600
Agroforestry Systems for the Appalachian Region	<u>1.6</u>	<u>400,000</u>
TOTAL	12.7	4,257,100

Question. Please provide significant research accomplishments attributed to each project.

Answer. Significant findings are as indicated following the project titles:

Alleviation of Acid Soil Constraints to Plant Growth. Surface application of coal combustion by-products (CCBP) increased forage yields in a native species acidic hill-land pasture by 28%, and increased maize field yields by 6%. Column studies with acid soil showed that dolomite limestone is a more efficient source of Mg than powdered magnesium hydroxide for preventing Ca/Mg imbalances in plants when gypsum is applied to acid soils. Boron toxicity was a problem for growth of plants when one fluidized bed combustion by-product was added to acid soil. Oxidic constituents of soils are more reactive with gypsum than Kaolinite indicating that gypsum application on more oxidic soils of the Southeast will raise subsoil pH and improve root growth. Several new types of CCBP have been generated through the CRADA agreement with DRAVO Lime Company and are being evaluated in Beckley. Progress on patenting a mineral-supplemented gypsum soil amendment is continuing.

Selection and Improvement of Plants for Infertile Acid Soils. Two isolates of vesicular-arbuscular mycorrhizal (VAM) fungi enhanced establishment of switchgrass on acid soil in the field. Microflora near roots of bahiagrass grown on Gilpin acid soil were significantly more diverse than in the bulk soil. Root colonizing bacteria can have a significant effect on crop performance. An acidic Ultisol with pH of 4.9 showed an enhancement in effectiveness of indigenous rhizobia due to liming on white clover growth. Soil microbial biomass in maize under no-tillage was nearly twice that found under conventional tillage. Differences in microbial biomass were seen to depth of 30 cm due to tillage methods. It appears that salinity tolerance is associated with higher flux of potassium through cell membrane and plant's ability to discriminate between potassium and sodium. Legume nodules maintain internal oxygen at appropriate low levels by controlling the size of intercellular air spaces by controlling the gain or loss of intercellular solutes and the consequent swelling or shrinking of cells. Tall fescue, orchardgrass, and switchgrass accessions selected under relatively severe acidic conditions (Georgia) have been introduced on hill-land acid soils around Beckley to evaluate their performances.

Acid Soils. Funds used during FY 1996 to acquire and develop land resources needed to pursue the multifaceted mission of the

laboratory with emphasis on management of acid soils, pasture productivity and water quality, and agroforestry.

Livestock Grazing Systems and Water Quality in Appalachia.

Grazing studies in the Beckley area show that a balance of fiber, energy, and protein improves nitrogen use efficiency in grazing livestock. If fiber energy and protein are in proper balance, less N will be excreted and the reduction in manure nitrogen will improve quality of water leaving the watershed. The dietary requirements leading to improved nitrogen use efficiency in grazing livestock can be met with combinations of grasses, legumes, and leafy plants like chicory that are native to or naturalized in Appalachian pastures. A predictive energy model for grasses has been developed that will help pasture managers decide how to stock or utilize a pasture to meet the energy demands of livestock. Growing livestock on pasture without grain supplementation led to leaner animals with greater unsaturated fat content than livestock supplemented with grain. Water quality research conducted by the laboratory has led to development of water resource management practices, including grazing techniques and engineering features, that improve and preserve water quality in highly agriculturalized karst landscapes.

Management and Ecology of Pastures in the Appalachian Region. An inexpensive rapid technique has been developed to predict water use requirements during drought. This will enable pasture managers to rapidly determine the degree of water stress and adjust management techniques accordingly. Types of plants are being evaluated for use in topographically complex environments that lead to improved production efficiency. The chemical composition of new and nontraditional plants is being examined as is the potential for production of bioactive compounds that may serve as herbivore deterrents. Experiments are being developed to explore the ability of complex pasture plant communities to serve as phytoremediators and maintain water quality, especially when the pastures are used for animal waste deposition. Mixtures of cool- and warm-season species are being used to improve the distribution of forage production to meet the season-long demands of grazing livestock.

Forage Legume Breeding for the Appalachian Region. A technique was developed to evaluate and screen clover germplasm for acid soil tolerance. A thin layer of acid, aluminum-toxic soil is placed on top of a water agar gel. Root emergence, of clover seedlings, from the soil into the agar is observed. Root emergence was related to aluminum levels in the soil solution. Because clover establishment is especially difficult in acid soils, improved acid-soil tolerance of white clover seedlings should be of value to producers.

Agroforestry Systems for the Appalachian Region. Since trees are the most productive plant species within Appalachia, integrating trees into agricultural systems has the greatest productivity enhancing potential as a management strategy since the adoption of lime and fertilizer use. Research is underway to find the best ways to improve and diversify income from hill-land pastures by planting appropriately spaced black locust, honey locust, or black walnut trees. Trees have been planted and instrumentation to study optimal resource allocation (solar radiation, water, nutrients) between tree and understory is being installed at the research sites. Plans are being made to develop new research projects with the objective being to improve specialty crop production under existing forest canopies.

AGROFORESTRY

Question. Please outline for the Committee the economic importance of agroforestry to the rural communities of the Appalachian region.

Answer. A relatively small percentage of Appalachia is currently managed as highly productive agriculture in spite of its abundant rainfall. One of the reasons for this is that little

research has been done in the past to develop agricultural systems that are uniquely suited for the Appalachian region. Most current agriculture is therefore an adaptation of systems developed for other regions. Agroforestry has the potential to greatly increase agricultural production in Appalachia. By integrating trees into agricultural systems, we can more closely imitate the sustainable ecological processes of the indigenous vegetation. Rural economies will flourish with the infusion of additional crops that will provide raw materials for value-added enterprises. Agroforestry systems also have potential to minimize management inputs that result in off-site environmental degradation. Nutrients are efficiently cycled and prevented from contaminating streams and rivers that supply water to the major cities of the Eastern United States. Agroforestry will also help reduce the adverse impacts of long rotation logging on rural communities traditionally impacted by boom and bust economies, by developing land use options that provide a sustained income. Further income security will result since agroforestry farms will be somewhat buffered from cyclic market fluctuations as a result of the diversity of products.

APPALACHIAN FRUIT RESEARCH STATION

Question. Please identify current research projects of the ARS laboratory at Kearneysville, West Virginia, including funding and scientific support for each project.

Answer. There are twelve base funded research projects at the Appalachian Fruit Research Station in Kearneysville, West Virginia. The individual projects, funding and scientific support for each project are provided for the record.

Molecular Biology and Genetic Engineering of Fruit Trees - \$842,100, 2.7 scientist years.

Genetic and Cultivar Development of Pear and Peach - \$540,200, 1.5 scientist years.

Cold Hardiness and Stress Adaptation in Fruit - \$273,700, 1.0 scientist years.

Related Costs for Apple Research - \$202,800. These funds are used to support high priority research needs identified jointly by ARS and the International Apple Institute. Projects are supported in Michigan, New York, and California with research on improving post-harvest technology and reducing pesticide use.

Biological Management of Deciduous Tree Fruit Insect Pests - \$374,000, 1.9 scientist years.

Plant Systems Linked to Wastewater Treatment - \$486,600, 1.4 scientist years.

Mechanization for Deciduous Tree Fruits and Small Fruits - \$303,600, 1.2 scientist years.

Vegetation and Soil Management in Fruit Production - \$572,700, 2.3 scientist years.

Improved Deciduous Tree Fruit Production Efficiency and Fruit Quality Through Integrated Cultural Management - \$611,000, 1.7 scientist years.

Deciduous Fruit Crop Diseases - \$442,200, 2.1 scientist years.

Nondestructive Sensors Measuring the Postharvest Quality of Apples - \$418,300, 1.0 scientist years.

Water Quality Control In Intensive Recycle/Reuse Aquaculture Production Systems, \$1,312,900, extramural project.

Question. Please provide significant research accomplishments attributed to each project to the fruit industry.

Answer. A listing of projects and significant research accomplishments are provided for the record.

Molecular Biology and Genetic Engineering of Fruit Trees - Transgenic plums showing immunity to plum pox virus were obtained via genetic engineering.

Genetic and Cultivar Development of Pear and Peach - Genes for resistance to viral and bacterial diseases that have devastating economic impact on grape production each year were transferred into 'Thompson Seedless' grapes by genetic engineering.

The same gene transfer techniques are being used to develop pear and peach cultivars resistant to viral and bacterial diseases.

Cold Hardiness and Stress Adaptation in Fruit - A gene encoding a "cryoprotective" protein was isolated from peach bark; manipulation of the expression of his gene could potentially decrease current tree fruit losses due to cold temperatures and expand the range of temperate tree fruits.

Related Costs for Apple Research - Nine specific cooperative agreements were initiated with university researchers to address problems of fruit storage and pesticide reduction.

Utilization of Waste and Byproducts from Aquaculture and Enhance Economic and Environmental Sustainability - Hydroponic plant production cleaned aquaculture wastewater to water quality standards equal to the original water in the spring source. Hydroponic plant production of lettuce, strawberry, and basil also generated a gross additional gross income of \$4/ft² of greenhouse area while removing a waste product.

Mechanization for Deciduous Tree Fruits and Small Fruits - In 1995, a mechanical harvester for fresh market blueberries was developed, tested, and licensed to a Michigan firm. This same harvesting concept was used to build a mechanical harvester for processing citrus. The citrus harvester was built, tested, and shown to be highly effective in removing various citrus fruits without damage to fruit, tree, or developing fruit. A unique trellis system for eastern thornless blackberries was developed that separates fruiting canes from vegetative canes. This trellis system together with the mechanical blackberry harvester are able to harvest fresh-market quality blackberries.

Vegetation and Soil Management in Fruit Production - A tensiometer irrigation valve was designed, tested, and patented in 1993. In 1995, a cooperative research and development agreement was in place with a Virginia company to commercialize this invention. The tensiometer valve senses the water content of the soil and opens an irrigation valve when the soil needs water and closes the valve when wet. It operates without electricity and only one moving part. It will have application in horticulture greenhouses, landscape settings, nurseries, and home gardens. Inert and non-toxic hydrophobic particles reduced disease incidence and repelled major insect pests of apple and pear. These reflective particles also reduced water stress. A cooperative research and development agreement is being negotiated to commercialize this broad spectrum, non-toxic pest control product.

Improved Deciduous Tree Fruit Production Efficiency and Fruit Quality Through Integrated Cultural Management - Selected ground cover systems or a new plant growth regulator reduced vegetative growth in apple trees and the number of shoots exhibiting fire blight symptoms. These findings could lead to improved fruit productivity and reduced tree losses from fire blight, a major problem in the Appalachian Region.

Nondestructive Sensors Measuring the Postharvest Quality of Apples - A prototype on-line system that non-destructively measures apple quality has been developed and is being evaluated in cooperation with an industry partner.

Water Quality Control In Intensive Recycle/Reuse Aquaculture Production Systems - Results of a field trial of the ultrasonic waste feed controller (UWFC) showed that satiation feeding with the UWFC or by hand produced the same feed conversion and 30-50% faster growth than ration feeding produced. A tagging experiment showed that growth of rainbow trout stocked at 8-12 cm (within a mixed cohort system) and harvested at 340 g was not strongly dependent upon initial length. Adding ozone to the water within a recirculating system was found to improve microscreen filtration, water quality, and reduce bacterial gill disease problems.

Question. What additional areas of research are required to further enhance the productivity of the research program at Kearneysville.

Answer. Pest and disease control is the single greatest cost in fruit production. Biological control research could be strengthened and productivity of the Kearneysville program enhanced

by strengthening the following areas of research. (1) Identify, characterize and implement the development and utilization of natural compounds and microorganisms as biocontrol agents in preventing or suppressing diseases and pests in pre- and post-harvest crop production. (2) Expand activities in biotechnology and the application of genetic engineering technologies in the development of transgenic plants with improved product quality and resistance to pests and diseases. (3) Investigate pesticide degradation and movement in orchard soils under various ground cover management systems to reduce ground water contamination.

FRESHWATER INSTITUTE

Question. Please detail for the Committee the cooperative research arrangements between ARS and the Freshwater Institute.

Answer. ARS has provided funds to the Freshwater Institute to support a portion of their research program on aquaculture in Appalachia. The research problems to be studied have been developed jointly by ARS and the Freshwater Institute, and the research proposals have been developed by the Freshwater Institute. After each proposal is developed by the Freshwater Institute, it is reviewed by ARS and refined through joint discussions. When this process is completed, the research proposal receives a peer review through the same process used to peer review research proposals for ARS scientists. Depending on the outcome of the peer review, the proposal may be approved for funding by ARS. It may require some modification before funding, or it may require extensive revision and subsequent peer review.

The research program at the Freshwater Institute has been a very productive cooperative research program. Research results have led to the development of improved biofilter designs, production management schedules that triple rearing system productivity, and innovative waste feed sensing and control devices that have attracted national and international industry attention.

ARS has conducted an in-house research program at the Freshwater Institute site near Shepherdstown, West Virginia. The ARS component of the research has been to develop means to remove wastes and dissolved nutrients from the water used for aquaculture before it is returned to streams or rivers. The water used in this research comes from the intensive culture research tanks of the Freshwater Institute.

Most of the ARS research has been focused on removing the nutrients through the technique of thin-film hydroponics, and using the nutrients to grow commercially valuable crops such as lettuce, sweet basil, strawberries, and turf grass. Research also has been done on artificial wetlands, that efficiently remove nutrients, but do not produce commercially valuable crops.

Question. What additional areas of research are required to further enhance the productivity of this cooperative?

Answer. Additional areas of research required to further enhance the productivity of this cooperation include research on alternative species of coldwater fish, optimization of production management systems, and new technology to efficiently and economically remediate impaired water resources, such as mine drainage and surface water, so that they can be used by the cool and coldwater aquaculture industry. This latter research could greatly increase the availability of water resources for cool and coldwater aquaculture, which heretofore has relied on high quality groundwater from springs or wells.

QUESTIONS SUBMITTED BY SENATOR INOUE

HAWAIIAN AGRICULTURE

This Committee has long expressed its commitment to the expansion of diversified agriculture and the necessity of investing in U.S. tropical and subtropical agriculture and aquaculture. In this

regard, I am disturbed to learn that while the Agricultural Research Service (ARS) proposes a Fiscal Year 1997 budget that is about \$16 million or 2 percent more than its FY 1996 appropriation, the agency proposes a reduction in Hawaii programs by \$1.8 million (a reduction of about 20%) over the same period. This is totally unacceptable in view of the enormous problems being encountered in Hawaii agriculture and the national impacts associated with the proposed reductions. As these investments come to fruition, it is extremely short sighted to now divert from this long term investment strategy.

TROPICAL AND SUBTROPICAL AGRICULTURE

Question. Is the proposed termination of programs indicative of the ARS's commitment to tropical and subtropical agriculture in general and, specifically, to the long term sustainable development of Hawaii's diversified agriculture?

Answer. These proposed changes should in no way be construed as a lack of commitment to tropical and subtropical agriculture in general, or to the long term sustainable development of Hawaii's diversified agriculture. ARS remains strongly committed to both. Further, ARS, in addition to existing resources in Hawaii, intends to focus its mainland resources and those of the other mission areas in the Department as much as possible on issues that can assist Hawaii in this difficult and highly disruptive transition in its agriculture. The need for genuine and effective communication on the nature of the problems and opportunities for development has never been greater.

SUBTERRANEAN TERMITES

The subterranean termite is one of the most damaging pests throughout the United States, affecting manmade structures as well as timber and orchard crops. In Hawaii alone, damages are estimated to be in excess of \$100 million annually. The subterranean termite causes the greatest economic damage to homes and other structures in Hawaii compared to any other pest. No longer limited to Hawaii, this pest flourishes in other parts of the U.S., including California and Florida. With increasing environmental concerns, especially ozone depletion due to fumigation control methods, as well as concerns for public health and safety, there is a continuing need to develop safe methods to control this devastating pest. Further, in October 1994, the ARS conducted a site visit and review of the Hawaii-based project, Nontoxic Termite Control. At the conclusion of this review, reviewers expressed strong support for the approach and productivity of the project.

Question. In view of the importance of this area of research and the strong performance to date, why has the ARS proposed termination of funding of this activity in Fiscal Year 1997?

Answer. The ARS has proposed to terminate funding for the subterranean termite research project in Hawaii because it was one of the 47 projects Agencywide judged to be less critical at this time. Project terminations were required to finance some of the priority program area increases in the national interest.

FRUIT FLY RESEARCH

Tephritid fruit flies are one of the most damaging agricultural pests, infesting more than 200 varieties of fruit. In Hawaii, these pests have restricted export of untreated fruit to mainland and overseas markets, and in many instances are so damaging as to preclude production even for local consumption. It is estimated that if such pests were to infest other states like California and Florida, control costs would exceed \$1 billion. In view of the magnitude of this problem, there is a need to develop fruit fly control methods that are effective and have minimal impact on the natural environment. Control methods currently available, such as bait sprays and male annihilation techniques, involve the use of

pesticides. Even the sterile insect release method often involves pesticide use to initially lower population densities. To address this major problem, the ARS and the University of Hawaii have collaborated on the development of a new project in Fiscal Year 1996 that addresses the efficacy and the environmental impacts of new fruit fly control methods. This project was viewed as especially significant since comparable research is not being done on this scale anywhere else. Yet, the ARS has chosen to delete funding for this important and unique program in Hawaii that has major implications for Hawaii agriculture as well as that of other states.

Question. Given the high priority of this area of research, what is the justification for the proposed elimination of funds for continuing this activity?

Answer. For any high priority area of research such as fruit fly research, there are several approaches to resolving the problem that vary in timeframe, probability of success and impact on the natural environment. Development of genetic engineering techniques for control of Hawaii fruit flies--the approach identified for elimination would no doubt contribute to the problem. Successful achievement of a genetic engineering approach within a reasonable timeframe requires adequate resources and a multidisciplinary team whose disciplinary complement varies with the development stage of the technology. Thus, though evaluation of this project held that it was highly relevant, it was determined that the project lacked the capacity to make a significant impact on the problem within the window of opportunity available to resolve the problem and permit Hawaiian agriculture to freely enter the world market.

TROPICAL AQUACULTURE

The activities conducted under the ARS-sponsored tropical aquaculture research program are critical in that Hawaii is an ideal and unique site for the development of aquacultural products in a tropical and subtropical environment. Not only are there significant import substitution benefits that will accrue with the expansion of U.S. aquaculture, but Hawaii provides a year-round natural laboratory to develop and test nutrition and pest management strategies that benefit the entire U.S. aquaculture industry. This is clearly an investment in the national interest since there is no other place in the country that has the natural environment and the professional expertise needed to support the development of aquaculture in the tropical and subtropical United States.

Question. Why has the ARS chosen to terminate funding for this important set of activities that have benefits for the entire U.S. aquaculture industry and for U.S. consumers?

Answer. The ARS has proposed to terminate funding for the tropical aquaculture research project in Hawaii, because it was one of 47 projects Agency-wide judged to be less critical at this time. ARS continues to support a significant effort to address issues and problems facing the National aquaculture industry. Project terminations were required to finance some of the priority program area increases including biodiversity of genetic resources and pest control programs.

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

INTEGRATED PEST MANAGEMENT

Question: The FY 1997 budget requests substantial funding increases in support of the Administration's integrated pest management initiative. In the USDA research, education, and economics mission area alone, the requested increase totals over \$14 million. Please list the ARS, CSREES, NASS and ERS programs and activities which are part of or support the IPM initiative, and indicate the level of funding provided for each fiscal years 1994, 1995, and 1996, and that proposed for fiscal year 1997.

Answer: The IPM Initiative includes the CSREES research and extension activities carried out for the primary purpose of developing and adopting IPM technology, the ARS areawide pest management pilot projects, and research on IPM adoption by ERS. In addition, there are major programs that support research on underlying technologies used by IPM practitioners, statistical programs on pesticide use, and programs to support the EPA registration process by providing information on the costs and benefits of pesticides currently in use and those in the registration pipeline and assistance to producers of "minor use" requirements. The amounts shown below are for the IPM Initiative.

IPM Initiative

(Dollars in millions)

	FY 1994	FY 1995	FY 1996	FY 1997
ARS-Areawide IPM Research	3.8	3.8	3.8	6.0
Research and Education:				
IPM Research Grant	3.0	2.7	2.7	8.0
Emerging Pest and Disease Issues	0.0	0.0	1.6	4.2
Expert IPM Decision Support System	0.0	0.0	0.2	0.3
Subtotal, Research & Education	6.8	6.5	8.3	18.5
Extension Activities:				
IPM Education	8.5	10.9	10.8	15.0
ERS-IPM Research	0.2	0.5	0.5	0.5
Total IPM Initiative	15.5	17.9	19.6	34.0

Question: The Administration has a goal to implement IPM practices on 75 percent of crop acreage by the year 2000. What percentage is currently considered under IPM practice? Where is the information documented?

Answer: The overall percentage of U.S. crop acres under IPM in 1996 has probably increased for certain commodities from the 50 percent reported by USDA's Economic Research Service --ERS-- in a 1994 report. USDA did not repeat the analysis in 1995 or 1996 due to the difficulty and costs associated with obtaining and analyzing the data needed for analyses of this sort. The Department is currently developing an improved methodology on which to base future analyses of IPM adoption. This effort is being led by ERS, with significant involvement of nine other USDA agencies and USEPA, which are members of USDA's IPM Program Subcommittee. USDA's National Agricultural Statistics Service --NASS-- will soon conduct an IPM and chemical use survey on U.S. corn acreage that will provide excellent data on IPM implementation for that commodity. The survey instrument that will be used by NASS was developed with the full involvement of ERS, CSREES, and the land-grant university system. The data, and the methodology used to analyze it, will give us a much clearer look at IPM implementation on corn than the 1994 data provided. The methodology used in the corn analysis will provide the model for assessments of IPM implementation conducted on other commodities. The most recent report on IPM implementation in the United States was published in 1994 and is titled *Adoption of Integrated Pest Management in U.S. Agriculture*; it was written by A. Vandeman, J. Fernandez-Cornejo, S. Jans, and B.H. Lin, Resources and Technology Division, Economic Research Service, U.S. Department of Agriculture.

Question: You state that a detailed IPM implementation plan, setting forth specific goals, milestones, and agency responsibility has been prepared. Will you provide that to the Committee?

Answer: Yes, we will provide the information for the record.

1994 STRATEGIC PLAN FOR IMPLEMENTATION OF USDA IPM INITIATIVE

MISSION/GOAL

To ensure that USDA carries out a single coordinated department-wide plan of research, education and action programs, in cooperation with state and private entities, that ensures the wide scale adoption of IPM systems that meet the needs of agriculture and the American public.

OBJECTIVES

I. USDA Coordination

Establish a mechanism that effectively coordinates USDA IPM policies and facilitates cooperation with non-USDA entities (public and private) in order to meet the Department's IPM goals.

Strategy:

Convene a USDA IPM Coordinating Committee under the Agricultural Council on Environmental Quality, consisting of the Administrators of agencies with responsibilities for IPM research and implementation or their representatives, and conduct regularly scheduled meetings to coordinate agency policies and review progress toward achieving USDA goals for IPM implementation.

Tactics:

- 1) Convene IPM Coordinating Committee, comprised of agency Administrators under the auspices of the Agricultural Council on Environmental Quality, reports to Deputy Secretary on implementation document, discuss communication and outreach strategy, and form IPM Program Subcommittee consisting of IPM program leaders. *October 1994*
- 2) USDA IPM Coordinating Committee meets bi-monthly to review progress in FY 1995 to continue preparations in anticipation of FY 1996 program, review communication and outreach efforts, and receive report from IPM Program Subcommittee.
- 3) USDA IPM Coordinating Committee names interim IPM Coordinator and announces permanent coordinator position. *January 1995*
- 4) USDA IPM Coordinating Committee participates in the development of FY 1997 budget proposal for IPM and coordination with Sustainable Agriculture and Water Quality programs. *April - June 1995*
- 5) USDA IPM Coordinating Committee reports to Deputy Secretary on preparation of annual plans and implementation of FY 1996 plan (pending appropriation action).
July 1995
- 6) IPM Coordinating Committee names permanent IPM Coordinator.
October 1, 1995

II. Research and Implementation

Establish and conduct a process for identifying the IPM implementation needs of producers and provide the support and resources necessary to conduct a coordinated program of research, development, and delivery of education and information to meet producers' IPM implementation needs. (A communication strategy will be followed to build user support for each of the steps in the overall effort.)

Strategies:

- A. ES will provide the funds necessary for state IPM coordinators to facilitate the establishment and support of state IPM teams. These teams will consist of producers, researchers, educators, crop advisors and consultants, public agencies, including APHIS, ASCS, SCS, and state agencies as appropriate, agribusiness, and associated industries at the appropriate local/regional level. The teams will work to establish a prioritized set of research, education and delivery needs, appropriate to specific crops and growing regions, for IPM implementation and will communicate those needs to the Regional Liaisons. The teams will also develop guidelines for IPM implementation that will be the basis for determining practices that qualify for incentive programs and for evaluating progress toward implementation goals.

Tactics:

- 1) ES in coordination with IPM Program Subcommittee initiates organization of IPM teams through preliminary program guidance in the ES Administrator's letter to State Extension Directors. *October 1994*
- 2) NAPIAP/ES collects IPM baseline information in cooperation with NASS and ERS, through the Extension NAPIAP RFP. *October 1994*
- 3) IPM Program Subcommittee develops proposed guidelines for establishing IPM teams, the framework in which they will operate, and the process by which they will be evaluated; ERS/NASS prepare strategy to evaluate extent of adoption, impacts on profitability and yield. *November 1994*
- 4) Discussion of guidelines with SAES and CES directors, user community. *November 1994*
- 5) ES Administrator issues program guidance for fiscal 1995 increase in 3(d) IPM funding that explains requirement to link IPM team priorities to ES IPM programming funded through formula funds in order to be eligible for ES/CSRS grants program. *December 1994*
- 6) State Extension IPM Coordinators submit plan of work supplement consistent with ES program guidance. *January 1995*
- 7) IPM coordinators convene crop teams (state/multi-state) to define IPM parameters for crop/regions; to establish baseline assessment of IPM adoption; to establish implementation goals; to set priority needs for research and education to be used by Liaisons in ES/CSRS grants process and for establishing Extension IPM needs in base programming; and to devise evaluation procedures. *February 1995*

8) USDA IPM Coordinating Committee, in coordination with SAES and CES Directors designate state/multi-state IPM liaisons to facilitate and evaluate activities of IPM teams, coordinate multi-state cooperation, and administer ES/CSRS grants program.

February 1995

9) IPM teams submit priority research and education needs and documentation of team efforts to IPM liaisons and USDA IPM Coordinator.

September 1995

10) Evaluation of IPM team activities and linkage of crop/state IPM needs to ES base programming by IPM liaisons and IPM Coordinator for submission of priority needs to ES/CSRS grants process. *October 1995*

11) IPM coordinators convene teams to evaluate progress in IPM adoption, effectiveness of research and education efforts and re-evaluate priority IPM implementation needs.

May - August 1996

12) IPM teams submit priority research and education needs and documentation of team efforts to IPM liaisons and IPM Coordinator for use in FY 1997. *September 1996*

B. ES and CSRS will establish a competitive grants program to meet the needs identified by the IPM teams. Regional IPM Liaisons will be designated in coordination with CES & SAES. These Liaisons will coordinate efforts among the states to implement IPM programs, will facilitate linkages between states and regions.

Tactics:

1) ES and CSRS, in consultation with IPM Program Subcommittee, develop proposed guidelines for IPM research and education grants program, administrative framework, and the process by which results will be evaluated. *January 1995*

2) Discussion of proposed guidelines with SAES and CES directors, user community.

January - March 1995

3) Guidelines completed. *May 1995*

4) Submission of priority needs to ES/CSRS grants process. *October 1995*

5) IPM priority needs made public in RFP solicitation by IPM liaisons. *November 1995*

6) Grants decisions made. *March 1996*

- C. ARS will establish a program to support the IPM needs identified by the state/multi-state teams by selecting projects suitable for areawide pest management from the priority needs. *October 1995*
- D. ES and CSRS will develop plant health/pest management curricula for use in the training of IPM professionals.

Tactics:

- 1) Convene multi-disciplinary teams of faculty, crop advisors and consultants, and specialists for design of year-long curricula on a regional basis (5 curricula/region). *January 1996*
- 2) Assemble educational resources needed for courses. *September 1996*
- 3) Develop pre-season and in-season course curricula. *September 1996*
- 4) Test and refine courses. *September 1996*
- 5) Identify and train teachers for curricula. *September 1996*
- E. Direction will be provided through the Administrator of ASCS to establish IPM as a priority for state and county Conservation Committees. *October 1994*
- F. The NRICGP will include IPM fundamental and mission-linked research needs identified by state/regional prioritization processes in its process of developing request for proposals. *October 1995*
- G. ES Administrator and SCS Chief will provide guidance to state and county staff that requires coordination of technical assistance provided to producers by the two agencies in order to ensure that programs offering pest and crop management recommendations integrate economic and environmental considerations. *December 1994*
- H. ES will provide personnel and operating funds necessary to expand the IPM educational programming necessary for improving the technical skills of producers and their advisors to meet the IPM implementation goal.

Tactics:

- 1) ES in coordination with IPM Program Subcommittee initiates organization of IPM teams through preliminary program guidance in the ES Administrator's letter to State Extension Directors. *October 1994*
- 2) ES Administrator issues program guidance for fiscal 1995 increase in 3(d) IPM funding that explains requirement to link IPM team priorities to ES IPM programming funded through formula funds. *December 1994*

3) State Extension IPM Coordinators submit plan of work supplement consistent with ES program guidance. *January 1995*

4) IPM coordinators convene crop teams (state/multi-state) to define IPM parameters for crop/regions; to establish baseline assessment of IPM adoption; to establish implementation goals; to set priority needs for research and education to be used by Liaisons in ES/CSRS grants process and for establishing Extension IPM needs in base programming; and to devise evaluation procedures. *February 1995*

I. EPA and USDA will establish a coordinated framework for collaborative efforts to develop and implement activities that will make pest management alternatives and techniques promptly available to agricultural producers when regulatory action results in the unavailability of certain agricultural pesticides or pesticide uses. CSRS, in coordination with the IPM Program Subcommittee and the USDA Coordinator as designated in the MOU with EPA, will:

1) Identify availability of information on crop/pest/control information. *October 1994*

2) Query genetic resistance database(s) for information on pest management problems. *November 1994*

3) Identify areas of pest management vulnerability. *December 1994*

4) Cross check USDA list of vulnerabilities with EPA Special Review list. *January 1995*

5) List of priority pest management needs established. *February 1995*

6) CSRS, ARS, ES, in consultation with IPM Coordinating Committee, develops RFP for the development of replacement technology for vulnerable pesticides according to characteristics and criteria in MOU. *April 1995*

7) RFP distributed. *October 1, 1995*

8) Grants awarded. *February 1996*

III. Evaluation

Develop methods and conduct programs to accurately measure progress toward the 75 percent IPM goal and assess the economic and environmental impacts of IPM implementation.

A. NASS will conduct annual surveys of IPM practices being utilized on major field crops and biennial surveys of IPM practices on fruits and vegetables. Consultation with producers, ERS and other researchers, educators, and crop consultants will be used to determine component

IPM practices and to design appropriate surveys. Following survey design and planning activities, the survey refinements will be introduced in the field in the 1996-97 crop year.

- B. In cooperation with other appropriate groups, the IPM Program Subcommittee will develop an IPM evaluation plan, utilize NASS survey data to assess progress toward adoption goals, and assess the economic and environmental impacts of the adoption of IPM practices.

Tactics:

1-- Assess the extent of IPM adoption among fruit, vegetable, and major field crop producers in major producing states and nationwide. *Publish Results Annually*

2-- Conduct follow-up studies on the effects of IPM adoption on pesticide use and economic performance and environmental impacts. *Publish Reports Annually*

3-- Release periodic statistical information on pesticide use and IPM adoption through Agricultural Resources and Environmental Indicators and AREI Updates. *Publish Results Annually*

- C. ERS and NASS, in cooperation with the IPM Program Committee and its designees, will establish a working group with USEPA --OPP & OPPE-- to develop and implement methods for evaluating environmental impacts of IPM implementation. *January 1995*

IV. Communication

Implement a communication and information exchange program that involves interested stakeholders and increases understanding of program objectives, progress, impacts, and benefits of IPM to the public and policy-makers through direct communication, print and broadcast media.

Strategies:

- A. IPM Coordinator will convene communication coordinators from NRE, S&E and OPA to develop a communications strategy for IPM Initiative that informs the user community and provides opportunities for public discussion of the IPM Initiative. *January 1995*
- B. APHIS, ARS, ASCS, ES, CSREES, FS, NASS, and SCS will jointly conduct an annual IPM workshop with agriculture and interested stakeholders to facilitate coordination and cooperation, advance the understanding and expand the knowledge base for IPM implementation, and provide for exchange of information on federal, state and private implementation efforts. *Summer 1996*

REPORT ON IMPLEMENTATION OF THE USDA IPM INITIATIVE STRATEGIC PLAN

I. USDA Coordination

Objective: Establish a mechanism that effectively coordinates U.S. Department of Agriculture (USDA) IPM policies and facilitates cooperation with non-USDA entities (public and private) in order to meet the Department's IPM goals.

A. Accomplishments

1. The IPM Program Subcommittee has been established with representation from the U.S. Environmental Protection Agency (EPA) and the following USDA agencies: Agricultural Marketing Service (AMS), Agricultural Research Service (ARS), Animal and Plant Health Inspection Service (APHIS), Cooperative State Research, Education, and Extension Service (CSREES) (Extension, Research, NRI, SARE), Economic Research Service (ERS), Farm Service Administration (FSA), Forest Service (FS), National Agricultural Statistics Service (NASS), Natural Resources Conservation Service (NRCS), and the Office of Budget and Policy Analysis (OBPA).
2. A USDA IPM Coordinator has been selected.

B. Needs

1. USDA agency heads need to be regularly informed of IPM activities in order to better coordinate associated programs efficiently and take advantage of opportunities for further progress towards IPM adoption and implementation goals. The list of associated programs includes, but is not limited to, the Water Quality Initiative, the initiative to develop alternatives to methyl-bromide and the Sustainable Agriculture Research and Education Program.
2. The members of the IPM Program Subcommittee need to be more actively involved in coordinating their agency's activities to support the Initiative at the state and Federal levels.
3. An assessment of progress in implementing the USDA Strategic Plan needs to be periodically conducted and shared within USDA for planning and budgeting.
4. Grant programs that are relevant to IPM need to be coordinated to ensure efficiency and effectiveness.

5. A simple and efficient electronic communication venue needs to be available for people inside and outside USDA to receive information on the IPM Initiative.

C. Fiscal Year 1996 Action Items

1. A bi-monthly report on IPM activities will be provided to the Under Secretary for REE, copied to other interested Under and Assistant Secretaries, and made available electronically to agency heads and members of the IPM Program Subcommittee. Members of the IPM Program Subcommittee will be asked to contribute information on IPM activities within their agency for inclusion in the report.
2. The USDA IPM Coordinator will prepare a quarterly report on progress in implementing the Initiative in cooperation with the IPM Program Subcommittee.
3. Grant and program managers from CSREES, NRI, Regional IPM, NAPIAP, SARE, EPA (ACE I and II), APHIS, ERS, and ARS will meet on a regular basis to share plans for grant programs and specific cooperative agreements (including draft requests for proposals), program outcomes and awards.
4. The IPM Home Page on World Wide Web is scheduled for completion November 1996. An IPM list server, scheduled to be operational in December 1996, will provide up-to-date information on the IPM Initiative for Program Subcommittee members and agency administrators.

II. Research and Implementation

Objective: Establish and conduct a process for identifying the IPM implementation needs of producers and provide the support and resources necessary to conduct a coordinated program of research, development, and delivery of education and information to meet producers' IPM implementation needs.

A. Accomplishments

1. State IPM Teams
 - a. Each state received \$25,000 in Extension funds in fiscal years 1995 and 1996 to support IPM planning for key commodities. A plan of work has been developed by each state and is now being implemented.
 - b. Teams consisting of growers, consultants, state and federal agency personnel, university faculty and others are identifying priority needs for IPM implementation at the state level.

2. Regional IPM Planning Teams

- a. Twenty-three IPM planning teams, representing 44 states, have been established and funded at approximately \$20,000 per project through the regional competitive grants process --see attachment-. Teams are identifying IPM implementation needs for 14 commodity or production regions. Involvement of other agencies on the 23 IPM teams are as follows: ARS--6 teams; NRCS--8 teams; APHIS--4 teams; CFSA-2 teams; EPA--1 team. Crop consultants are participating in 14 IPM teams and local and state-based environmental and consumer groups are involved in 12 projects.
- b. Planning for project level and overall national impact assessment of IPM implementation is underway. An assessment methodology is under development for the draft request for proposals for Phase II of the National IPM Development and Implementation Program. A plan for overall national assessment of IPM impacts has been jointly developed by ERS, NASS and CSREES.
- c. CSREES/Smith-Lever 3--d-- and EPA/ACE II funds have been committed to the four regional IPM competitive grants programs; each agency will provide approximately \$100,000 to each of the four regions --total of \$800,000. These funds will be matched with \$100,000 per region from the CSREES/Special Research Project funds to provide support for joint research-extension projects in each region.

3. Areawide IPM

- a. ARS held a meeting in March 1994 to identify and prioritize opportunities for implementation of areawide pest suppression. The meeting was attended by representatives from APHIS, ARS, EPA, CSREES and the land-grant university system. A prioritized list of potential areawide IPM projects was developed.
- b. ARS and land-grant university faculty in California, Oregon, and Washington are conducting research and implementing an areawide IPM project for codling moth.
- c. ARS organized a meeting in St. Louis, Missouri, September 19-20, 1995, to determine the feasibility of conducting an areawide IPM program for corn rootworm suppression in the Midwest. The meeting involved stakeholders, land-grant university research and extension faculty, and ARS researchers.
- d. ARS initiated an areawide IPM program for tobacco budworm in Mississippi.

- e. The feasibility of conducting other areawide IPM programs is being explored.

4. Pest Management Alternatives Program (EPA/USDA MOU)

- a. CSREES, NAPIAP and EPA developed a survey methodology and decision support system to identify critical needs for pest management alternatives based on the EPA list of pesticides that may undergo regulatory action. Commodity groups, the Department of Interior, EPA, the USDA IPM Program Subcommittee and all land grant universities were involved in identification of critical needs to be addressed through the Pest Management Alternatives Program.
- b. Based on these critical needs, a request for proposals was developed and published in the *Federal Register* on November 6, 1995. The request for proposals was sent to 1862 and 1890 land-grant universities, affected commodity groups and federal agencies. The scheduled due date for proposals is December 12, 1995. Awards will be announced in January 1996.
- c. The Pest Management Decision Support System was developed in conjunction with Argonne National Laboratory. This computer software integrates EPA, IR-4, state NAPIAP, and NPIRS databases and permits user-friendly access by scientists and decision makers.

B. Needs

1. State IPM Teams

- a. State IPM Coordinators need to use federally provided funds to obtain direct input from farmers, commodity groups and farm organizations on priority IPM research and extension needs. The state IPM teams need to initiate and facilitate the grassroots support needed to implement IPM. Stakeholder support for public sector IPM programs must be built at the state level. For the purpose of this strategic plan, the term "stakeholders" includes growers, consultants, land-grant university faculty (extension and research), appropriate state and federal agencies, non governmental environmental and consumer public policy interest groups and others. The target date to obtain grower-identified priority needs is February 1, 1996.
- b. The grower-identified IPM research and extension needs developed by the state IPM teams need to be prioritized and provided to regional and national grant programs and the USDA Program Subcommittee (including EPA).

- c. State plans to achieve IPM implementation need to be developed with a time-line for deliverables and accomplishments. It must be clear that the plan and associated research and extension priorities were developed through active involvement of growers. State Extension Service and Agricultural Experiment Station directors need to mobilize new and existing resources to support IPM plans that focus on grower-identified priorities.
 - d. State departments of agriculture and other appropriate state agencies need to be involved in IPM implementation planning where appropriate.
 - e. Resources are needed for IPM impact assessment and establishment of base-line information regarding IPM adoption. This information is critical to state planning. It is strongly suggested that state IPM teams include an economist with responsibility for IPM program impact assessment. These state team economists will be expected to coordinate with ERS economists and the anticipated Overall IPM Impact Assessment Team in national IPM program impact assessments.
 - f. State IPM plans need to be provided to AMS, ERS, NAPIAP and NASS so these agencies and programs can focus survey and other data collection efforts in support of efforts to assess IPM adoption and the public and private impacts of IPM implementation.
 - g. CSREES, EPA, Pesticide Education Programs, land-grant universities and consultants need to participate in the design of continuing education and degree programs that meet IPM implementation needs.
 - h. Continued and strengthened formula funding via the Hatch and Smith-Lever Acts will be needed to achieve the IPM implementation goals established by the IPM Initiative.
2. Regionally Funded IPM planning teams
- a. Each regional IPM team needs to develop a prioritized plan for IPM research and extension education. This plan should cover the next 5-6 years and include a methodology for assessment of the public and private impacts of IPM implementation and a plan for privatization. These plans need to be shared with members of the IPM Program Subcommittee to coordinate IPM adoption and implementation assessment at the national, state, and local levels.
 - b. IPM team plans, emphasizing grower and other stakeholder identified priorities, need to meet critical needs with existing and new resources. It should be clear to all involved that grower-

driven priorities and recognition of regional and national environmental priorities are a prerequisite for federal funding.

- c. USDA and EPA field staff need to be involved as appropriate in state and regional IPM planning teams. Integration of the EPA Pesticide Environmental Stewardship Program into the IPM Initiative will provide a mechanism to more fully involve commodity and farmer organizations.
- d. Continued funding for regional IPM competitive grant programs via PL89-106, Smith-Lever 3(d) and EPA ACE II (biopesticides) funding is needed to achieve IPM implementation goals. State and regional team activities that demonstrate grower and intra/inter-agency involvement will be needed to garner continued and strengthened funding.
- d. CSREES, EPA, Pesticide Education Programs, land-grant universities and consultants need to participate in the design of continuing education and degree programs to meet IPM implementation needs.

3. Areawide IPM

- a. Areawide IPM strategies need to be considered and evaluated as major tools in increasing IPM implementation.
- b. Areawide projects need to be better integrated with state and regional IPM projects (as appropriate) to achieve greater program impacts and efficiencies.
- c. The process of stakeholder involvement in priority-setting and project selection and implementation needs to be continued. Areawide activities will continue to target efforts on grower-identified priorities from state, regional and federal IPM planning teams.

4. Pest Management Alternatives Program

- a. USDA needs to continue to coordinate with EPA to make the critical needs identification process more efficient.
- b. A coordinated effort within USDA and with state land-grant universities (including state coordinators for the IPM, IR-4, NAPIAP, and Pesticide Education programs) is needed to build and maintain a fully functional Pest Management Decision Support System.

- c. The scope of the request for proposals may need to be broadened to include the full range of critical pest management needs.

C. Fiscal Year 1996 Action Items

1&2. State and Regional IPM Priority Research and Extension Needs

- a. The main priority for the USDA IPM Coordinator and the involved USDA agencies must be identifying research and extension priorities at the state and regional levels by convening stakeholder teams to provide input to the regional competitive grants programs and the national program by February 1, 1996. The effort must make it clear to all involved that grower-driven priorities are a prerequisite for federal funding and that USDA field staff need to be fully involved on the state and regional teams. Included along with grower-driven priorities are potential solutions to environmental problems related to agricultural pesticide use.
- b. Subsequent guidance for IPM plans of work for state Extension Services will target resources to meet grower-identified needs.
- c. Grower-identified priorities will be provided to NRI and other IPM-related grant programs to assist in priority setting. It is expected that these priorities will be reflected in NRI's request for proposals.
- d. The need and feasibility of including growers and consultants on regional IPM coordinating committees will be assessed.
- e. State and regional team priorities will continue to be provided to the regional IPM grants programs to assist in priority setting. Regional requests for proposals are expected to reflect state and production region IPM team priorities.
- f. Full involvement of USDA field staff is needed in state and regional IPM teams.
- g. Inform and involve state departments of agriculture, natural resources and other appropriate state agencies in IPM implementation planning.

2. Pest Management Alternatives

- a. Conduct an evaluation of the Pest Management Decision Support System (PMDSS). Develop a plan to identify data gaps and coordinate USDA efforts to fill those data gaps so that the

PMDSS serves the needs the information needs of USDA, EPA, and state-based users.

- b. Integrate host and pesticide resistance databases into PMDSS.
- c. Consider discussions with EPA to expand the MOU to include crop-pest sites affected by section 6(f) of FIFRA.
- d. Continued funding for further development of the PMDSS will be required to fully integrate needed databases into the system.

III. Evaluation

Objective: Develop methods and conduct programs to accurately measure progress toward the 75 percent IPM goal and assess the public and private sector impacts of IPM implementation.

A. Accomplishments

- 1. An ERS/CSREES workshop, attended by staff from ARS, CSREES, EPA, ERS, NASS and the land-grant universities, was held to develop methods and coordination structure to assess private and public sector impacts of IPM implementation.
- 2. ERS has contracted for white papers on methodology for project level and overall assessment of IPM adoption and implementation. These papers will be presented at the Third National IPM Symposium/Workshop and published in the workshop proceedings.
- 3. ERS published preliminary estimates of IPM adoption in September 1994. Specific work on vegetables, potato, tomato, strawberry, and cotton has also been published. Work is in-progress on citrus.
- 4. ERS has solicited posters and papers on IPM assessment from the social science community for presentation at the Third National IPM Symposium/Workshop.
- 5. ERS working with NASS has expanded coverage of IPM practices in NASS surveys of agricultural producers.

B. Needs

- 1. ERS needs to have discussions with consultants, growers, researchers and extension faculty to determine feasibility of IPM implementation, appropriateness of evaluation methods and usefulness of survey methods.

2. ERS needs to coordinate further with NASS, NAPIAP, and the state and regional IPM teams on the data gathering functions that would be relevant to assessment of IPM adoption and implementation on a project and overall basis.

C. Fiscal Year 1996 Action Items

1. ERS will conduct a full day of IPM impact assessment activities at the Third National IPM Symposium/Workshop.
2. ERS and AMS will work with NASS to improve and expand IPM-related questions in surveys on commodities, pesticide use, cropping practices, etc.
3. ERS will dialogue with crop consultants and Certified Crop Advisors on methods to assess impact of IPM programs on their clientele.
4. The IPM Program Subcommittee will develop appropriate indicators of program outcomes to meet requirements of the Government Performance and Results Act.
5. ERS will initiate the plan for the National Overall IPM Assessment Team.

IV. Communication

Objective: Implement a communication and information exchange program that involves interested stakeholders. The objectives of this program are to increase public and policy-maker understanding of IPM program objectives, progress, impacts, and benefits. Direct, electronic, print, and broadcast communication methods will be used.

A. Accomplishments

1. The Third National IPM Symposium Workshop has been planned and scheduled for February 27 to March 1, 1996, in Washington, D.C.
2. A series of single-page fact sheets on the IPM Initiative were developed and widely distributed.
3. Articles on the IPM Initiative have appeared in several farm magazines, commodity and trade newsletters and newspapers.
4. The USDA IPM Coordinator has held meetings with many state IPM teams, commodity groups and other interest groups on the USDA IPM Initiative Plan and its implementation.

B. Needs

1. Continue to meet with state and regional IPM teams, grower groups and other stakeholders to ensure their involvement in the needs identification, priority-setting and project planning processes.
2. A national IPM communications strategy needs to be developed. Involvement of REE, NRE, OPA and agency staff in development and implementation of this strategy is needed to ensure a coordinated approach.
3. Articles on the IPM Initiative need to be provided to all commodity and farm organizations. Articles need to be customized for each organization.
4. The IPM Program Subcommittee and the USDA IPM Coordinator need to focus intensively on the IPM Initiative over the next four months.
5. The IPM Initiative needs to be on the agenda of state commodity and farmer organizations. Interactions with land-grant university partners and state-based federal agency personnel will be utilized.
6. The IPM Program Subcommittee needs to interact proactively with commodity, consultant, and other groups to hear their needs.
7. Farmers, consultants and representatives from environmental and consumer interest groups need to be fully involved in the National IPM Symposium/Workshop.
8. A communications strategy to showcase the National IPM Symposium/Workshop needs to be developed and implemented.

C. Fiscal Year 1996 Action Items

1. Write commodity-specific articles for trade magazines and newsletters on IPM benefits and the USDA IPM Initiative.
2. Contact commodity and trade organizations regarding the IPM Initiative from November 1995 to February 1996.
3. Encourage state partners and state-based federal agency personnel to get the IPM Initiative on state commodity and farm organization agendas. Communications materials will be provided to each state by December 1995.

4. Develop and implement a strategy for news coverage for the National IPM Symposium/Workshop with REE communications staff for the period of February to March 5, 1996.

V. Global Perspective

Objective: Develop and negotiate international standards and validation processes for IPM that would promote acceptance of products produced using IPM in foreign markets.

A. Accomplishments

1. International standards for pest-free areas have been established between regional plant pest protection organizations. Draft standards for survey and eradication have been developed.

B. Needs

1. A risk assessment process is needed to identify potential commodities and export markets for IPM products. Input from growers is needed.
2. Standards defining necessary components and threshold criteria of IPM programs are needed for international acceptance.
3. A mechanism to validate adherence to international IPM standards is needed.

C. Fiscal Year 1996 Action Items

1. Meet with grower groups and state and regional IPM teams to determine potential export markets and current barriers that derive from crop pest problems.
2. Determine the degree to which current IPM program activities meet international standards for pest-free areas.
3. Define the process, procedures and responsibilities for auditing and validating IPM programs for export certification.

Question: An increase of \$5.269 million is requested under CSREES for Integrated Pest Management and Biological Control. The notes indicate that these additional funds will support research priorities identified by IPM implementation teams. What research priorities have been identified?

Answer: We have engaged more than 4,250 customers, including 3,205 farmers, in identifying priority research and extension needs for IPM implementation at the state level. In addition to this state-level needs assessment process, 23 production region IPM teams in 44 states have identified needs for

crop production regions. These teams involve 154 farmers or crop consultants, 36 food processors or marketers, state and national level commodity organizations, agribusinesses, USDA and EPA field personnel, and research and extension faculty at cooperating land-grant universities. Priority research and extension needs have been identified for 63 different commodities. The following are a few examples of the research priorities that farmers have identified.

In cotton, improved pest management strategies for cotton insects, including improved boll weevil eradication and management programs; improved strategies for aphids, tobacco budworm, beet and fall armyworm, whiteflies, stinkbugs; more refined action thresholds for pests on transgenic cotton; improved weed, disease, and nematode management systems; resistance management strategies for insecticides, herbicides, and transgenic cotton; improved use of biological control of insects, diseases, and nematodes. Research needs identified are estimated to require a \$2.8 million investment over the next five years.

In the corn and soybean production system, improved management strategies for gray leafspot, European corn borer, corn rootworm; use of transgenic corn in IPM programs, including resistance management; impact of areawide residue management on pests; improved varietal resistance to pests, including soybean cyst nematode; development of crop phenology, pest development, and action thresholds for pest management; better understanding of dynamics involved in weed infestation, weed seedbank management, and control; improved use of biological control of insects, diseases, and nematodes; better understanding of impacts of tillage and rotation strategies on pest severity; resistance management for pesticides and transgenic varieties critical to the IPM system; control of perennial weeds in no-till systems; better systems studies involving rotations, economics, development of action thresholds, and areawide pest management; improved soybean disease management; management pests unique to no-till systems; improved strategies for management of aflatoxin and other micotoxins; better understanding of interactions of pesticides and fertilizers in corn/soybean crop health management. Research needs identified are estimated to require a \$2.3 million investment over the next five years.

In potatoes, development of comprehensive strategies for management of potato late blight, nematodes, potato scab, verticillium wilt, soft rot, and silver scurf, Colorado potato beetle, aphids, virus diseases, leafhoppers, volunteer potatoes and weeds, improved predictive systems for pest control; better use of cover crops for management of weed, disease, insect, and nematode problems; better sampling and economic action levels; improved strategies for management of storage decay problems; and better understanding of role of water management in IPM.

In wheat, improved management strategies for disease, weed, and insect problems in reduced tillage cultural systems; weed resistance management strategies; improved control strategies for virus, fungal, and insect pests, including wheat streak mosaic, Russian wheat aphid, tan spot, head scab, and Karnal bunt,

cutworms and wireworms, wheat stem sawfly; development of economic thresholds and IPM management strategies for wild oats and jointed goatgrass.

NATIONAL RESEARCH INITIATIVE COMPETITIVE GRANTS PROGRAM

Question: The Committee is aware that the Department has been a strong advocate of competitively-awarded research grants as opposed to formula funds and other research grants. Also, several Land Grant Universities have been strong advocates of competitive grants. Could you tell us the precise manner in which a research proposal is given consideration through the competitive process and exactly who serves on the committee which ultimately selects the winning grants? Are they scientists? Land-Grant representatives? USDA employees? Farmers? All of the above?

Answer: The Department strongly advocates growth in competitive grants as part of a research portfolio which includes formula funds and selected grants of national or regional priority. The program announcement or request for proposals (RFP) emphasizes agricultural research of high national priority and calls for both fundamental and mission-linked studies of high national interest. The NRI scientific staff and Chief Scientist develop the RFP's based on advice from Congress, the academic community, peer panelists, commodity groups, and other stakeholders interested in agricultural research. The RFP is revised annually upon approval of the Deputy Administrator of the Competitive Research Grants and Awards Management (CRGAM) office and the NRI Board of Directors. Currently, the Board is composed of the Administrators of ARS, CSREES, ERS, and the head of Forest Service research. It is chaired by the Deputy Undersecretary of the REE mission area, with the Deputy Administrator of CRGAM serving as the Executive Secretary.

The competitive process used by the National Research Initiative Competitive Grants Program, NRI, involves review by scientific peers. Peer review is coordinated by a Program Director, an NRI scientist who is responsible for overseeing the review process and for providing assistance and advice to the Panel Manager. A program's Panel Manager, who becomes a temporary USDA employee, is selected each year by the NRI Chief Scientist in consultation with the Program Director. The Panel Manager is a scientist who is widely recognized by the scientific community for research contributions and who is currently engaged in research in a scientific discipline central to the Program's mission. The Panel Manager is responsible, in consultation with the Program Director, for selection of panel members with the necessary expertise, review experience, and breadth of knowledge. A Panel Manager also selects additional four to six reviewers for each proposal whose written assessments, called *ad hoc* reviews, are also solicited. The Program Director acts for the Program in the absence of the Panel Manager or when a Panel Manager cannot participate in the review process because of a conflict of interest.

Usually a panelist is appointed for every 10 proposals under review. A panelist provides written reviews for about 20 proposals and is asked to read an

additional 10; thus, each proposal is reviewed in depth by two panel members and a third one is familiar with the proposal. At the panel meeting, the Panel Manager acts as the impartial chairperson of the meeting and the Program Director ensures that the proper peer review procedures are followed. Each proposal is described, discussed, and comments from panelists and *ad hoc* reviewers considered as the panel reaches consensus concerning its disposition.

Each proposal is evaluated based on the factors established in the NRI Administrative Provisions and announced in the Federal Register. These evaluation factors include: scientific merit of the proposal, qualifications of the proposed project personnel and adequacy of facilities, and relevance of project to long-range improvements in and sustainability of United States agriculture or to one or more of the research purposes stated in Section 1402 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977, as amended (7 U.S.C. 3101). Proposals are ranked and final program recommendations are then presented to the Chief Scientist who recommends the awards.

A major responsibility of the Program Director in overseeing the program is to ensure adherence to the rules concerning conflict of interest and confidentiality. Avoidance of conflicts of interest during the peer review process is integral to the integrity of the process and of the program. The conflict rules state that reviewers, panelists, panel manager and any other member of the program or office staff do not participate in any aspect of review or evaluation of a proposal: if there is any institutional affiliation with or financial interest in the proposal; if there is any relationship, such as that of thesis or postdoctoral advisor or advisee, within the past five years with any scientist associated with the submitted proposal; if there has been, within the past five years, or there is planned any scientific collaboration with any investigator(s) submitting the proposal; if there is co-authorship on a research publication within the past five years with any investigator associated with the proposal; if there has been or will be any relationship as a paid consultant to the investigator(s) or institution(s) involved, or if, for the potential peer review participant, there has been or will be gain or benefit derived from funding of the proposed project.

Confidentiality, both with respect to proposal submission and reviewer identity, is equally important to the process. The Program accepts proposals, the intellectual property of the investigators, in confidence. The Program also protects the identity of reviewers, freeing them to provide honest assessment during review.

Institutional affiliation of panelists, as a percentage, in Fiscal Year 1994, Fiscal Year 1995 was as follows:

	<u>FY 1994</u>	<u>FY 1995</u>
Land-Grant Universities	68	68
Public or Private Universities and Colleges . . .	12	13
Federal Laboratories	14	11
Other Affiliation	6	7
Total	100	99

The last category includes panelists employed by private foundations and by industry, those who are consultants, and those who are self-employed such as farmers.

Question: What percent and amount of FY 1995 NRI grants were awarded to Federal agencies? Which agencies won these awards?

Answer: Three percent of the FY 1995 National Research Initiative --NRI-- awards went to Federal agencies. These agencies were USDA's Agricultural Research Service and Forest Service and the US Naval Research Laboratory.

Question: Can you provide data on the cost-effectiveness as well as clear examples of significant benefits to U.S. agriculture which have resulted from the USDA National Research Initiative competitive grants program?

Answer: Estimation of the cost-effectiveness of research, particularly basic research, is difficult given the time lag between the conduct of the research and the ultimate application of results to the development of products and services. Additionally, the detailed and large effort required in tracking a project's impacts on other research and development efforts is immense. The latter is particularly important since much basic research yields inputs into more applied research enabling any number of products or technologies to be developed.

While the cost-effectiveness of the NRI or individual research projects has not been specifically estimated, the benefits of public investment in agricultural research have consistently been shown to outweigh the costs. For example, work by the Economic Research Service (ERS) indicates, even when using conservative assumptions, a return on investment in basic and applied agricultural research of at least 35 percent. (USDA, Economic Research Service, "The Value and Role of Public Investment in Agricultural Research," Staff Paper Number 9510, May 1995.) The ERS report also concluded that the private sector lacks the incentive to conduct much of the basic research necessary to sustain productivity growth, that the private sector focuses instead on lower risk product and technology development, and that agricultural basic research tends to have twice the benefits to society, with returns on investment of 60-90 percent as compared to more applied agricultural research.

Investment in agricultural research contributes significantly to the U.S. economy. Moreover, in an economy dominated by world trade, the importance of the agriculture and food sectors will likely continue to increase. Data from the 1993 ERS report shows that:

- food and fiber contributed 14.5 percent of the Gross Domestic Product,
- the food and fiber system contributed 16 percent of all civilian jobs in the U.S. economy,
- U.S. agricultural exports contributed to \$101 billion in business activity, and
- U.S. agricultural exports contribute to a positive trade balance with an estimated \$20 billion surplus.

NRI research is directed toward high priority research of importance to agriculture, forestry and the environment. As a result, economic issues are at the heart of much of supported research. An examination of projects funded since Fiscal Year 1993, reveals at least 300 projects directly addressed to a specific problems of economic importance. For example, NRI projects address economic losses due to animal and plant diseases, plant and animal pests, and pre- and post-harvest spoilage of commodities and food, food borne illnesses, poor market understanding, and natural resource degradation. Other projects seek to increase efficiency of plant and animal systems, for example greater yields or reproductive or growth efficiency; enabling plants to grow in varied and often sub-optimal environments; or to specifically develop agriculturally derived products with greater economic value.

A cursory patent search yielded several U.S. patents arising out of NRI and its predecessor Competitive Research Grants Office supported research projects. This is indicative of the innovativeness and utility of such research as well as the intent to capture real benefits. Examples include:

Ethanol production by *Escherichia coli* strains co-expressing Zymomonas PDC and ADH genes and Ethanol production by recombinant hosts and Use of recombinant bacteria for ethanol production. --United States Patents 5,000,000 and 5,424,202--. Plans are currently underway to capitalize on these recombinant bacteria in a commercial-scale facility to produce ethanol from a renewable agricultural residue such as rice hulls, rice straw, corn, bagasse, etc., at a price competitive with current ethanol production of approximately \$1.00-1.20 per gallon.

Method for production of petroselinic acid and OMEGA 12 hexadecanoic acid in transgenic plants --United States Patent 5, 430,134--. This work involved production of transgenic plants with lipids containing the fatty acid petroselinic acid. It is typical of many efforts related to development of plants with superior properties for use by processors or end users.

MHC eukaryotic promoter --United States Patent 5,441, 889. A promoter enhancers for a bovine MHC class I gene was incorporated in recombinant nucleotide sequences and vectors that, in one form, may be linked to a foreign gene for expression in a wide range of mammalian host cells. Such work finds application in a wide range of animal biotechnology related to improved animal health, and production of high value therapeutics.

Insect repellent containing 1-dodecene --United States Patent 5,030, 660. When applied to an insect or insect habitat, compositions containing 1-dodecene are effective in deterring insects and thereby reducing crop damage from insect pests.

Biodegradation of halogenated hydrocarbons utilizing ammonia-oxidizing bacterium --United States Patent 5,055, 193. Arising out of research on nitrogen fixation, this project resulted in a bacterium with potential use in soil reclamation and improving water quality, both key problems faced by agriculture.

Biologically safe transformation system using a Ds transposon --United States Patent 5,225, 341. Method for producing transgenic plants that contain the gene of interest but are free of foreign ancillary nucleic acids. Greater efficiency in producing transgenic plants with desirable agronomic or end-use traits benefiting both farmers and consumers. Recombinant Rhizobium bacteria inoculants --United States Patent 5, 183, 759. A symbiotic bacterium that forms nodules on leguminous plants combining superior nodule formation with the greater competitiveness against other bacteria resulted from this research. Such work contributes to greater soil fertility, reduced needs, and higher yields of crop plants.

It is known that patent applications have been filed or patents are pending for other NRI-supported research: hyperexpression of bioelastomeric peptides, use of corn grits for air drying, leather-polymer interpenetrating polymer networks, and superabsorbent protein hydrogel.

Question: What types of mission-oriented, problem-solving agricultural production research is funded through the NRI on corn, wheat, cotton, and rice or other major commodities?

Answer: The primary role of the NRI is to support fundamental research which provides foundation knowledge for solving problems in agricultural commodities. This research involves the development of principles that can be broadly applied, is often cross-commodity, and can be more mission-oriented. The following examples are only a small sampling of the numerous projects being supported in the stated commodities.

- It is estimated that loss of **rice** crops due to diseases and pests amounts to at least 10 billion dollars a year worldwide. The NRI is funding several projects to isolate genes in wild and cultivated rice responsible for pest resistances. Once these genes are isolated, they can be directly transferred

into susceptible cultivars, resulting in agronomically valuable transgenic rice plants.

- New and more complex crop management systems are being developed to improve environmental quality, reduce pest problems, and maintain high productivity. The NRI is funding research to investigate the potential for a **wheat**/legume cover crop strip cropping system to reduce wheat curl mite. The NRI is also funding research to test a new model for managing multi-crop systems that include **wheat** and **corn**. This new model simulates multi-year, multi-species crop rotations and soil processes with a variety of management options, and its projections of crop productivity and soil fertility will be tested.
- For the past 40 years, resistant varieties of **wheat** have been bred to reduce damage from Hessian fly, a major wheat pest. The widespread use of resistant cultivars has resulted in the evolution of new virulent biotypes of the fly. To date, 26 different resistance genes to the fly have been identified, and the ability of the fly to adapt is specific on a gene-by-gene basis. Therefore, wise management of the various wheat genes is important to maximize their longevity and effectiveness. The NRI is funding research to develop molecular markers for these wheat genes, which can be used in developing breeding strategies to effectively manage the broad arsenal of genes available for maximum durability of resistance.
- Herbicide resistance and public concern over agrichemicals in the domestic water supply are causing scientists to develop new weed control techniques. The NRI is funding research to identify traits in **corn** that confer increased tolerance or greater suppressive ability of velvetleaf. Once these traits are identified, they can be used by breeders to develop lines of corn that have greater inherent ability to out-compete velvetleaf in the field.
- Natural fibers such as **cotton**, wool, etc. are the preferred materials for apparel. In natural fiber research, marketing and processing, many price-determining properties of fibers are routinely assessed either subjectively with manual methods or objectively with expensive equipment. The NRI is funding research to create an image analysis system for fiber measurement and grading. The system will strengthen the U.S. natural fiber industry by providing a production and marketing tool for fiber producers, buyers, researchers, and textile manufacturers to use in quality/evaluation and product improvement.
- The NRI is funding research to prepare new inorganic/organic hybrid coatings known as ceramers from linseed and **soybean** oil-based alkyds to provide better adhesion and corrosion protection to metal substrates in a base coating, or primer, application for aircraft. This process could replace the currently used, environmentally hazardous, chromium treatment with the environmentally friendly ceramer coatings without

sacrificing corrosion protection and while creating another use for these vegetable oils.

- An NRI project examines the catalytic upgrading of lactic acid produced by fermentation of **corn** derivatives and which is projected to be a major crop-derived feedstock in the next few years. Products of interest are acrylic acid, the building block of acrylate polymers and plastics, and 2,3-pentanedione, a high-value specialty chemical with potential as a biodegradable solvent and food additive. Producing these products from agricultural resources will increase crop demand and utilization, reduce U.S. dependence on imported oil and reduce formation of greenhouse gases.

Question: Secretary Stauber, you have recently expressed a concern for accountability in a speech before the American Association for the Advancement of Science. Can you tell us how recipients of USDA National Research Initiative --NRI-- competitive grants are held accountable for how the grant money is spent. Specifically, since we have funded NRI at approximately a half billion dollars over the past decade, can you enumerate a list of accomplishments or actual problems which have been solved as a result of these competitively-awarded grants.

Answer: The Competitive Research Grants Office was established in USDA in 1978 to provide an opportunity for scientists to undertake research on fundamental questions relevant to agriculture. Peer review of projects was employed to identify the projects having highest scientific merit. The \$15 M program began with four areas of plant research and one in human nutrition. The program was expanded in FY 1985 to increase knowledge to exploit biotechnology for agriculture. The expansion to about \$44 M allowed addition of programs in animal science. With authorization of the National Research Initiative --NRI-- in the 1990 Farm Bill, the competitive program was expanded again in 1991 to \$75 M, and mission-linked programs were added to the research portfolio.

Within the overall research portfolio of USDA, the mission of the competitive grants program is to seek fundamental knowledge related to agricultural issues. Others programs within the portfolio, industry, and others draw upon this knowledge to solve agricultural problems. Thus, an equally important question is to ask how the NRI has contributed to advancing science in areas that have been or are going to be important to improving and sustaining agriculture. Fundamental research supported in the early years by competitive grants is now yielding substantial returns; it is clear that whole areas of agriculturally-related fields have made significant advances as a result of the limited support. Examples include research that has substantially contributed to the present understanding of the biology of the plant host and its pests, allowing development of biological management for integrated pest management practices. Research to determine the role of nutrients for humans at the cellular and molecular levels is fostering improved human health through better dietary recommendations to the general public. Research in animal science has contributed to improved reproductive performance of animals, new technologies to better tap genetic potential such as embryo transfer and genome mapping, and control or prevention of animal disease

through improved diagnosis and vaccination. Research in plant science has led to increased crop yield, increased efficiency through understanding plant nutrition, development of varieties resistant to pests and disease, and management techniques for improved survival, yield and reduced environmental impact.

Thus, USDA competitively funded research has provided the underpinnings for remarkable achievements in agriculture. The expansion of competitive grants as manifested in the NRI will result in similar important advances being made on a broader front, the results of which will become more apparent in the future as work progresses.

Question: Secretary Stauber, you have questioned the lack of accountability with Hatch formula funds. Do you consider accountability with NRI competitive grants to be satisfactory ?

Answer: Yes, I do consider accountability with NRI competitive grants to be satisfactory. Levels of accountability exist at multiple tiers to assure good stewardship of resources.

USDA has established an NRI Board of Directors. It is chaired by myself, the Under Secretary for Research, Education, and Economics, and composed of the administrators of the Agricultural Research Service --ARS--, Cooperative State Research Education and Extension Service --CSREES--, and Economic Research Service --ERS--, the Deputy Chief for Research of the Forest Service --FS--, the Chief Scientist of the NRI, and the Deputy Administrator, Competitive Research Grants and Awards Management. The board establishes internal operating policy for NRI, including approval of the annual program description and request for proposals. The board has the added advantage of integrating USDA's research agencies, especially ARS, ERS, FS, and the CSREES, more closely with the program.

Additionally, NRI scientific staff have met and consulted with a variety of user groups to solicit their input on the program description, thereby assuring its continued responsiveness to the needs of the agricultural sector.

The internal management of NRI is comparable to that of the highly successful NSF and NIH extramural grants programs, and the program's staff have regularly sought advice from those programs to supplement their own experiences. Panels of scientists with demonstrable stature in their fields evaluate and rank the submitted proposals in terms of scientific quality and relevance to the long-term sustainability of agriculture. Strict attention is paid to the avoidance of any conflict of interest, both real and perceived. The use of the competitive peer review process assures that only the best proposals that are relevant to the sector are funded.

Once proposals are funded, NRI Program Directors solicit annual progress reports from all their funded investigators to monitor the accomplishment of project objectives. In addition, each researcher is required to submit yearly

reports that are approved by NRI Program Directors and then entered into USDA's electronic Current Research Information System --CRIS--.

One of the most important ways that the NRI is accountable is to assure that supported investigators progress in their stated objectives. This is done at the renewal stage when an applicant requests additional funding. Renewal proposals must compete in the same stringent competitive peer review process that is used to make awards to new projects. Under this system only renewal requests that have demonstrated significant progress and impact and have published these results in readily available journals are granted additional funds.

Through the incorporation of accountability at multiple tiers of the grants process, I feel confident that the disbursed funds will be a tremendous asset to the agricultural sector, consumers, and also the U.S. economy.

Question: How much money and what percent of NRI grants in fiscal years 1993, 1994, and 1995 were classified as mission-linked research? In percent, what was the breakdown between basic and applied research?

Answer: In Fiscal Year 1993 a total of \$29,903,218 was classified as mission-linked, representing 32.6 percent of the NRI grants. In Fiscal Year 1994 a total of \$35,954,536 was classified as mission-linked, representing 37.2 percent of the NRI grants. In Fiscal Year 1995 a total of \$34,052,316 was classified as mission-linked, representing 36.4 percent of the total appropriations.

In Fiscal Year 1993, 67.4 percent of the funds supported basic research, while 32.6 percent of the support was for applied research. In Fiscal Year 1994, 62.8 percent of the funds supported basic research, while 37.2 percent was awarded to accomplish applied research. In Fiscal Year 1995, 63.6 percent of the funds was dedicated to basic research, while 36.4 percent was used to conduct applied research.

Question: How much money and what percent of NRI grants in fiscal years 1993, 1994, and 1995 were classified as fundamental research?

Answer: In Fiscal Year 1993 a total of \$61,911,262 was classified as fundamental research, representing 67.4 percent of the NRI grants. In Fiscal Year 1994 a total of \$60,676,905 was classified as fundamental, representing 62.8 percent of the NRI grants. In Fiscal Year 1995 a total of \$59,743,966 was classified as fundamental, representing 63.6 percent of the total appropriations.

Question: How much of the fiscal year 1995 NRI grants went to: Federal, Land Grant, non-Land Grant, and other public and private organizations? How does this compare to those grants awarded in 1990 and 1985.

[The information follows:]

NATIONAL RESEARCH INITIATIVE
Grants Awarded for Fiscal Years 1985, 1990, and 1995

	FY 1985	FY 1990	FY 1995
Land-Grant	\$28,890,315	\$30,338,465	\$68,251,434
Public	4,011,408	2,986,200	9,159,105
Private	5,685,272	3,150,829	7,946,904
Federal	3,143,355	2,384,302	2,599,363
Veterinary Schools and Colleges	2,443,450	1,249,612	3,302,108
Other/Individual	- -	200,500	2,537,367
Total	44,173,800	40,309,908	93,796,281

Question: How did the Administration determine the level of recommended increases for each of the major components of the NRI program? How would the administration prioritize the requested increases of \$33,265,000?

Answer: The Administration determined the recommended level of funding for NRI divisions as necessary to do the following:

- 1) Increase funding for critical NRI programs such as Agricultural Systems, Biological Control, and Water Resources; programs that are a priority for the agency but are funded at extremely low levels.
- 2) Allow all NRI programs to support a higher percentage of quality proposals. Virtually all NRI programs are underfunded and not able to supported many proposals that are ranked as a high priority for funding. Increased appropriations to the NRI will enable support of more proposals, thus providing important funding of projects that will supply vital knowledge necessary for facing today's and tomorrow's agricultural problems.
- 3) Enable the NRI to increase the size of grants. The average size of a grant supported by the NRI has not significantly changed since the inception of agricultural competitive grants back in 1978. The average size award is \$127,000 providing the investigator with just over \$60,000 per year. The actual cost of doing research has risen substantially in the past 18 years, because of increased salaries for technical help, such as technicians and postdoctorals; increased costs for supplies and equipment and other laboratory expenses; and increased costs of field work, such as fuel, agricultural chemicals, land costs, etc. In order for scientists to choose agricultural fields upon which to work, available funding must be adequate to cover real costs. Thus every effort must be made to keep NRI grants competitive with grants given by other Federal agencies so that the best U.S. scientists will bring their talents to bear on agricultural problems. It should be noted that, in their 1989 report leading to the establishment of the NRI, the National Academy of Sciences recommended that the size and duration of the average competitive grant should be much larger than what is currently provided by the NRI. Unfortunately, the appropriations for the NRI have not reached a sufficient level to enable larger awards.

All of the NRI's six divisions are in need of increased funding for the above stated reasons. However, when prioritizing the requested increases, two divisions

stand out because of the significant reductions suffered in the 1996 appropriation. The Plants Division which had a budget of \$41,266 million in 1994 and \$39,630 million in 1995 --includes IPM and Pesticide Impact Assessment lines that were integrated with the Plants budget in the 1994 appropriation--, was further reduced to \$37,000 million in the 1996 appropriation. This represents a 10 percent reduction from the 1994 appropriation and a 7 percent reduction from 1995 appropriation. The Natural Resources and Environment Division also suffered a major reduction from the 1994 and 1995 appropriation. NR&E had an appropriation of \$22,325 million in 1994 and a budget of \$20,833 million -- includes Water Quality line that was integrated with the NR&E budget in the 1994 appropriation-- in 1995. The 1996 budget was further reduced to \$17,650 million representing a 21 percent reduction from 1994 and a 15 percent reduction from 1995.

The USDA leads all other Federal agencies in support of plant science research. The NRI is the largest source of funding for competitive plant science research in the Federal government. The Plants Division is the largest division within the NRI. It has ten well established programs that support research in critical areas of plant genome mapping, integrated pest management, biological control, and basic other plant sciences. Forty percent of the mission-linked projects supported by the NRI are funded through the Plants Division as well as forty percent of the sustainable agriculture-related projects. If the NRI is to meet its mission of supporting high quality fundamental and mission-linked research and research related to sustainable agriculture, the Plants Division requires additional resources. If the current budget trend reflecting a reduction of funds for the Plants Division is continued, the USDA is likely to lose its leadership role in the plant sciences.

The Natural Resources and the Environment --NR&E-- division of the NRI also is of critical importance to agricultural research. The five programs are the only source of extramural Federal funding for several areas such as soil science, mineral nutrition of plants, improved wood utilization, agricultural water quality problems, forest production and crop ecosystems, and effects of environmental stresses that result in crop loss. Twenty percent of the mission-linked projects supported by the NRI and forty percent of its sustainable agriculture research are supported by funds from this division. A substantial portion of these projects aim to develop improved agricultural practices that reduce impacts on water quality. This category of research is in severe jeopardy as a result of the reduction in funding for fiscal year 1996. The result was the elimination of the Water Quality line because these funds had been used by the NR&E division to support research in aquatic ecosystems and soils which was focused on improving water quality. In addition, research funded by the NR&E category more frequently requires multi-disciplinary approaches entailing larger, more expensive projects. To adequately support this integrative research in recent years has required funding fewer projects, leaving much high-quality, agriculturally important science unfunded.

Question: Please provide an explanation as to how the funding will be coordinated with other agencies in the Department.

Answer: NRI activities are well coordinated among the USDA agencies. The NRI Board of Directors is composed of the heads of all the agencies within the REE mission area as well as the head of research at the Forest Service. All calls for proposals are approved by this board and the board keeps abreast all NRI changes in policy or procedure. The NRI received input from ARS National Program Leaders and other agency research leaders when crafting the call for proposals. This assures that the NRI was meeting the needs of the other USDA agencies. Other USDA research priorities can be fully integrated into the NRI by USDA researchers who successfully apply for NRI grants. Under these circumstances, the NRI becomes a full collaborator in pursuing the priorities of all USDA agencies as well as the priorities of scientists within the states.

The new REE Policy Council, established in 1996, comprising administrators of USDA's action agencies, also provide an opportunity for agency input to the NRI.

Question: Please explain in detail the Agricultural Systems Research -- ASR-- program.

Answer: Most research, whether applied or fundamental, seeks to understand the components of a larger system. Scientific breakthroughs often arise from discoveries focussing on a specific component of the larger system. These advances then open new or improved ways to understand and manage the system as a whole. A more thorough understanding of the system as a whole, however, also relies on the understanding of the interactions between and among the components. This type of information is best pursued through systems research.

An important role of the NRI within the broader portfolio of USDA-funded research programs is to open new areas of science and engineering with relevance to agriculture, food, and the environment. In an on-going effort to fulfill this role, the NRI encourages research by multidisciplinary teams representing the biological, physical, chemical, economic, social, and management sciences wherever and whenever appropriate. The Agricultural Systems Research program initiated in Fiscal Year 1994 is an example of this effort.

The purpose of the Agricultural Systems program is to obtain knowledge that is essential to sustain the viability of agriculture. The program supports systems research that has the potential to aid in the development and/or evaluation of national, regional, community, and/or farm level practices and policies that will sustain: a safe and adequate supply of agricultural products and services; environmental quality and the natural resource base; human health; and the economic viability and quality of life of rural communities; and address linkages between urban and rural areas. Supported research must indicate near-term, practical applicability and opportunities for information and technology exchange.

This program is funded with 2 percent or about \$1.75 million of the annual funds awarded as grants from the NRI. In consultation with a broad array of systems researchers throughout the United States, NRI scientific staff prepared the

Fiscal Year 1994 program solicitation. A multidisciplinary peer review panel convened in July 1994 and evaluated 88 proposals. Available funds supported ten research projects and one conference. The scientific review panel also dedicated an additional day of deliberations to serve as an advisory committee for modifying the program solicitation for the next fiscal year. In Fiscal Year 1995, 69 proposals were evaluated by the NRI peer review panel. Nine research projects and two conference awards were granted. The review panel concluded that the program solicitation did not require modifications for Fiscal Year 1996.

The panels assembled to rank the proposals each year include social scientists, extension specialists, engineers, and producer representation, as well as researchers representing the more traditional plant, animal, soil, and microbiological sciences. The overall acceptance rate of submitted proposals is approximately 12 percent. Although program funds are only sufficient to fund 9-10 proposals annually, by selecting the most innovative, conceptual, and useful projects each year, over time, agricultural systems research will be as productive and familiar scientifically as are the other NRI programs at present.

Question: When was this ASR program initiated and was it recommended by the agency, Department, or OMB?

Answer: The NRI's Agricultural Systems Research --ASR-- program was initiated in Fiscal Year 1994. The impetus for initiating the ASR program originated from the NRI's scientific staff, in consultation with the agricultural community, who recognized the need for such a program.

Question: Why isn't the ASR program a line-item proposal within the NRI?

Answer: None of the NRI programs are line items. Funding is appropriated to the six NRI divisions which then distribute the funds to the thirty NRI programs, including the ASR.

Question: Is the two percent now taken on the base appropriation?

Answer: The two percent is taken from the base appropriation of the NRI minus 4 percent federal administration, a small business assessment, and a biotechnology risk assessment.

Question: How many grants have been awarded to date through this assessment?

Answer: In Fiscal Year 1994 ten research projects and one conference were funded. In Fiscal Year 1995 nine research projects and two conference awards were granted. To date, 19 research projects and 3 conferences have been funded.

Question: What results have been achieved?

Answer: The ASR program is only beginning its third year of existence. The duration of funded projects ranges from two to four years and at this time all of the supported research is still ongoing. Two year projects funded in Fiscal Year 1994 will be completing their objectives later this year. Results are therefore still pending.

Question: How are research grants awarded through the NRI inventoried?

Answer: All NRI grants are inventoried through the Current Research Information System --CRIS-- for commodity, research problem area, field of science, and progress. In addition, each NRI grant is inventoried as fundamental or mission-linked research, as single-discipline or multidisciplinary research groups, and for its contribution towards strengthening small and mid sized institutions or institutions in EPSCoR states --Experimental Program to Stimulate Competitive Research. Each grant is also inventoried for its relationship to: aquaculture, animal welfare, brucellosis, Pseudorabies, biological control, integrated pest management, 11 insect pests, pesticide targets, methyl bromide, weed science, wetlands, groundwater, water quality, national marine pollution, energy/biofuels, new uses for agricultural commodities, advanced manufacturing technology, biotechnology, medical, food safety, nutrition education, plant genome, forest biology, global change, sustainable agriculture, animal genome, animal health, and ecosystems research.

Question: How are the research results coordinated to address specific problems of an immediate or long-term nature?

Answer: NRI recipients publish their research results in peer reviewed journals appropriate to the science being pursued in the grant. These journals give the most comprehensive, coordinated view of current trends and results in scientific research. In addition, research results are presented at professional meetings and scientific conferences which are attended by others working in similar fields, or individuals interested in applying results. Professional meetings and conferences are carefully coordinated to provide the most current and comprehensive overview of current scientific theory and practice. NRI staff attend scientific conferences to stay abreast of research results so that program descriptions can be changed appropriately to encourage the most state-of-the-art agricultural science. The NRI has significant representation on committees within the National Science and Technology Council --NSTC. The purpose of the NSTC is to coordinate the various government science agencies to assure that critical areas of science are being supported, to identify gaps in funding opportunities, and to coordinate results arising from support of scientific research.

Question: How is this information transferred to the marketplace?

Answer: The fundamental and mission-linked research supported by the NRI contributes to the knowledge base used by industry, producers, growers and managers to develop new practices, products, or services. Most NRI research results are published in scientific journals or presented at scientific meetings where they may be adopted by industry or extension for further application. NRI

scientists may directly interact with industry, extension agents and producers to apply results. NRI scientists and their institutions apply for patents. In addition, NRI grantees may worked directly to obtain Small Business Innovative Research Grants to pursue research for development of products or services.

Question: Please list research results emanating from NRI that industry is using.

Answer: Fundamental research supported in the early years by competitive grants is now yielding substantial returns; it is clear that whole areas of agriculturally-related fields have made significant advances as a result of this limited support. The expansion of competitive grants as manifested in the NRI has resulted in more fundamental and mission linked knowledge that can be adapted by industry in pursuit of product development. In spite of the inherent lag between support of fundamental research and application of results to agricultural issues, the NRI and its predecessor CRGO, have provided important fundamental knowledge currently applied by industry. A few select examples of this follow.

- Basic studies in plant genetics and plant growth and development have led to the ability of industry to regenerate transformed plant tissues. This has enabled industry to develop transgenic plants containing agronomically important genes. The entire plant biotechnology industry has flourished due to basic research supported by the NRI.
- Genes were identified and cloned with support from the NRI which are responsible for production of phloroglucinol by bacteria from soils which suppresses wheat take-all disease. In April of 1996, these genes were licensed to CIBA-GEIGY Corporation --CIBA Crop Protection.
- The demand for products of fisheries is projected to grow 25-30 percent by the year 2000. One of the main factors that will determine whether aquaculture will meet this demand is the ability to control disease outbreaks in high-production fish and shellfish rearing facilities. Infectious hematopoietic necrosis virus --IHNV-- is a rabies-like virus that causes severe losses of young fish in hatcheries in the Pacific Northwest. Infectious pancreatic necrosis virus --IPNV-- is another severe pathogen that is one of the most common fish viruses. Both IHNV and IPNV attack all salmonid fish, including trout and salmon. Research funded by the NRI has resulted in the development of vaccines for these important viral diseases. Both vaccines are currently licensed to Marigenetics --Corvallis, Oregon-- and DiagXotics --Wilton, Connecticut-- for further product development.
- Markers for double muscling in beef cattle that were identified through NRI support are being pursued by the American Breeders Services company.
- Transova Genetics, a company in Iowa, is using in vitro fertilization techniques developed by researchers funded through the NRI.

- Granada, a company in Texas, applied the embryo cloning techniques developed by NRI funded scientists.
- Optimization of analytical and isolation methods for the highly valued food ingredients of garlic and onion flavorants is being obtained through a more complete understanding of organosulfur chemistry. U.S. Patent 5,478, 959 entitled "Method for preparing 1, 2-dithiins and precursors of 1,2-dithiins" is one outcome of this project.
- Ethanol production using specifically designed recombinant bacteria was first accomplished with support from the NRI Alcohol Fuels Program. Less expensive ethanol production including production from a larger range of less costly substrates is expected. Two patents, Ethanol Production by *Escherichia coli* strains co-expressing Zymomonas PDC and ADH genes and Ethanol production by recombinant hosts and Use of recombinant bacteria for ethanol production. --United States Patents 5,000,000 and 5,424,202-- have resulted from this work. Plans are currently underway to capitalize on these recombinant bacteria in a commercial-scale facility to produce ethanol from a renewable agricultural residues such as rice hulls, rice straw, corn, bagasse, etc., at a price competitive with current ethanol production of approximately \$1.00-1.20 per gallon.
- An NRI project focusses on elucidating factors leading to the deterioration of fire-retardant treated wood in construction. Results from this project are expected to be used by chemical companies to design more effective fire retardant systems.
- An NRI supported research in Mississippi working Lonza Company is developing new wood preservatives which are more environmentally benign than currently-used chromated-copper-arsenate.

Question: Please list results emanating from NRI that agricultural producers are using.

Answer: Fundamental research supported in the early years by competitive grants is now yielding substantial returns; it is clear that whole areas of agriculturally-related fields have made significant advances as a result of this limited support. The expansion of competitive grants as manifested in the NRI has resulted in more fundamental and mission linked knowledge that can be adapted by producers and managers in pursuit of improved agricultural practices. In spite of the inherent lag between support of fundamental research and application of results to agricultural issues, the NRI and its predecessor CRGO, have provided important fundamental knowledge currently applied by producers and managers. A few select examples of this follow.

- Producers are about to have a more economically and environmentally sound method of combatting corn and cotton pests by the recent

introduction of genetically engineered crops that expressed a toxin produced by the harmless soil dwelling bacteria, *Bacillus thuringiensis*. NRI supported projects on cotton and corn genetics as well as fundamental studies of corn and cotton pests have led to the development of cotton and corn that express bt. Bt, when expressed in plants, is toxic to insects and other plant pests, but is not harmful to humans. Currently 400,000 acres of land are planted with bt engineered corn and it is estimated over 3.4 million acres may be planted by next year. It is expected that by using cotton that expresses Bt, producers can significantly cut costs and improve the environment by reducing pesticide use.

- Researchers at the University of Southern Mississippi are examining use of lesquerella oil and its fatty acids as raw materials for synthesis of novel polymer coating and foam compositions. The effort seeks to exploit unique features of lesquerella and its fatty acids to impart desired hydrophobicity, drying, and rheological properties to resulting film and foam compositions. Lesquerella is a possible replacement for castor oil, virtually all of which is imported. This will give producers a new value-added product.
- As a result of an NRI supported project to determine the active chemicals produced by soybean root-knot nematodes that induce resistance in soybeans, breeders now have a current standard *in-vitro* test to screen soybeans for resistance. This test aids breeders in rapidly developing resistant soybean lines.
- Research supported by the NRI has identified indicators to predict suppression of tomato root diseases in organically managed or composted soils. It has also determined factors that contribute to suppression of these root diseases more widely and constitutively. This information has been useful to tomato producers in California in their efforts to manage root diseases of tomato in the face of losing methyl bromide.
- Southern Corn Leafblight is a disease that caused major damage to the U.S. corn crop in 1970. Research supported by the NRI led to an understanding of the role of Texas male sterile cytoplasm in corn susceptible to this disease. It also led to an understanding of the nature of the fungal toxin responsible for this disease. Because of this information, it is less likely that the U.S. will see an epidemic of that proportion again.
- Potato late blight is a disease that has become increasingly important in recent years because a strain of the fungus that causes this disease has arisen which is resistant to the fungicide metaxyl, that has normally been used to control this disease. The NRI has supported research to characterize the nature of this resistance. The results of this research should be useful in controlling the disease.
- Winter saprolegniosis is one of the most problematic diseases affecting the catfish industry. The disease is estimated to account for about 10 percent

of the annual fish mortalities and \$20 - \$40 million each year in losses. Until recently, there was no available treatment or therapy for this disease. Fiscal Year 1994 NRI supported research conducted at the University of Mississippi to study disease mechanisms and protective immunity of Saprolegnia has determined that the disease can be prevented by adding formalin or diquat to the water at concentrations presently FDA approved in catfish ponds for other purposes. Formalin inhibits Saprolegnia cyst germination while diquat stunts hyphal growth from newly germinated cysts.

- A genetic marker used to identify pigs susceptible to the disease known as pig stress syndrome is being used by swine producers to select for reduced stress susceptibility.
- Infectious bursal disease --IBD-- is an acute, highly contagious viral infection of young chickens. At The Ohio State University researchers developed nucleic acid probes and molecular hybridization and monoclonal antibody-based assays to detect IBD virus infections and virus subtypes. At Mississippi State University and Purdue University other teams developed polymerase chain reactions and nucleotide sequencing that provide diagnostic tests. These tests enable poultry producers to quickly and accurately diagnose an IBD outbreak. This research was supported both by the NRI and also by Hatch Act funding.
- NRI supported research at the University of Massachusetts and the USDA-ARS Clay Center has identified genetic markers for double muscling in beef cattle. These markers are being used for selection by beef cattle breeders.
- Research conducted at the University of California identified markers for candidate genes for kappa casein. Dairy producers are using this marker to increase milk solids by about 17 pounds per lactation. In addition, the quality of cheese produced from the milk is improved.

Question: What is the average size of a grant award under the NRI?

Answer: The average size of an NRI award in 1995 was \$127,773 total award for 2.13 years.

Question: Please provide a summary of the geographical distribution of the competitive research grants awarded under the National Research Initiative for the last two years showing the state, entity, and funding level.

[The information follows.]

NATIONAL RESEARCH INITIATIVE COMPETITIVE GRANTS

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
ALASKA		
University of Alaska, Fairbanks	312,500	147,000
ALABAMA		
Auburn University	534,237	1,000,078
University of Alabama, Birmingham	--	272,000
University of Alabama, Huntsville	--	111,769
University of South Alabama	286,000	143,000
Alabama A&M University	130,000	--
Subtotal	950,237	1,526,847
ARIZONA		
Arizona State University	90,000	160,000
Northern Arizona University	--	120,000
University of Arizona	1,140,857	1,561,622
Subtotal	1,230,857	1,841,622
ARKANSAS		
University of Arkansas	417,299	1,032,080
University of Arkansas, Pine Bluff	115,000	--
Furman Sizemore	--	80,000
Subtotal	532,299	1,112,080
CALIFORNIA		
University of California, Berkeley	1,814,866	755,031
University of California, Davis	4,385,505	4,729,511
University of California, Irvine	410,000	--
University of California, Los Angeles	231,868	160,000
University of California, Riverside	1,766,795	1,598,000
University of California, Oakland	--	79,000
University of California, San Diego	278,800	440,000
University of California, Santa Barbara	60,000	315,000
University of California, Santa Cruz	143,000	--
University of California, San Francisco	187,000	--
California State University, San Marcos	50,000	--
Beckman Research Institute of the City of Hope	200,000	--
Salk Institute for Biological Studies	100,000	315,000
The Scripps Research Institute	100,000	
San Francisco State University	--	170,000
Stanford University	--	578,385
USDA, ARS	--	401,323
USDA, ARS Albany, California	648,500	
USDA, Forest Service, Pacific SW Station	--	542,000
USDA, Forest Service, Berkeley	570,000	
Andrea Cupp	--	80,000
Kris Lambert	--	80,000
Darren Sandquist	--	80,000
Vipula Shukla	--	80,000
Beth Thomas	--	80,000
Robert Wilson	--	80,000
Timothy R. Collier	80,000	--
Michael B. Cooley	80,000	--
Helga L. George	80,000	--
Paul J. Ode	80,000	--
Diane Wagner	77,800	--
Subtotal	11,344,134	10,563,250
COLORADO		
Colorado State University	795,000	1,651,000
University of Colorado	--	310,100
University of Colorado, Boulder	285,000	--

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
University of Colorado Health Sciences Center	220,000	--
USDA, ARS Northern Plains Area	214,364	5,000
USDA, ARS, Fort Collins	6,000	--
USDA, Forest Service	54,570	--
USDA, Forest Service, Rocky Mt. Forest & Range Exp. Sta. .	--	32,640
USDA, Forest Service, Fort Collins	147,360	
U.S. Department of the Interior	--	277,300
Rob R. Ramey	80,000	--
Adele M. Turzillo	80,000	--
Subtotal	1,882,294	2,276,040
CONNECTICUT		
Connecticut Agricultural Experiment Station	143,947	219,000
University of Connecticut	725,782	297,789
Yale University	145,000	300,000
Yale University, School of Medicine	206,000	--
Subtotal	1,220,729	816,789
DELAWARE		
E. I. de Pont de Nemours & Co.	50,000	50,000
University of Delaware	318,406	1,137,004
Subtotal	368,406	1,187,004
DISTRICT OF COLUMBIA		
American Society of Microbiology	--	4,778
Carnegie Institution of Washington	100,000	64,000
U.S. Naval Research Laboratory	--	120,000
Howard University	57,000	--
Subtotal	157,000	188,778
FLORIDA		
Florida A&M University	49,750	--
Tampa Bay Research Institute	130,000	5,337
University of Florida	1,794,453	3,089,660
University of Miami	130,000	144,000
University of South Florida	110,000	--
Michael Green	--	79,567
Subtotal	2,214,203	3,318,564
GEORGIA		
University of Georgia Research Foundation	1,168,344	1,824,233
Agnes Scott College	23,156	--
Clark Atlanta University	68,130	--
USDA, ARS South Atlantic Area	797,361	--
Subtotal	2,056,991	1,824,233
HAWAII		
Hawaiian Sugar Planters' Association	--	138,000
University of Hawaii	313,807	527,000
Subtotal	313,807	665,000
IDAHO		
University of Idaho	597,711	1,007,838
Idaho State University	--	49,998
Subtotal	597,711	1,057,836
ILLINOIS		
Northwestern University	340,000	60,000
Southern Illinois University	36,993	--
University of Illinois	2,909,127	2,743,050
University of Illinois, Chicago	72,000	205,000
USDA, ARS	2,397,996	--
USDA, ARS, Peoria	--	621,000
Knox College	--	140,000
Martin Christ	--	80,000
Stanley Hileman	--	80,000

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
William Brown	80,000	--
Subtotal	5,836,116	3,929,050
INDIANA		
Ft. Wayne State Developmental Center	--	150,000
Indiana University	90,000	88,000
Indiana State University	36,993	--
Methodist Hospital of Indiana, Inc.	--	110,000
Purdue University	2,825,925	2,353,230
University of Notre Dame	120,000	420,915
Laura Zonia	--	80,000
Subtotal	3,072,918	3,202,145
IOWA		
Iowa State University	1,590,495	1,580,449
University of Iowa	384,000	--
Anne Kimber	80,000	--
Subtotal	2,054,495	1,580,449
KANSAS		
Kansas State University	1,003,260	1,876,095
University of Kansas	160,000	--
Susan Pruiett	--	80,000
Eric Maurer	80,000	--
Subtotal	1,243,260	1,956,095
KENTUCKY		
Bellarmino College	44,814	--
Murray State University	--	49,130
The University of Louisville Research Foundation, Inc.	--	260,000
University of Kentucky	1,206,206	814,914
Kentucky State University	45,000	--
Subtotal	1,296,020	1,124,044
LOUISIANA		
Louisiana State University & A&M College	715,679	258,500
Louisiana Technology University	--	50,000
University of Southwestern Louisiana	--	120,000
Tulane University	205,000	--
USDA, ARS	90,000	--
Subtotal	1,010,679	428,500
MAINE		
University of Maine	360,483	567,194
MARYLAND		
Smithsonian Institute	--	246,200
St. Mary's College of Maryland	--	63,934
The Johns Hopkins University	--	125,000
Towson State University	49,521	--
University of Maryland	736,264	821,000
Univ. of Maryland Center for Environ./Estuarine Studies	--	156,600
University of Maryland Biotechnology Institute	--	251,000
University of Maryland, Baltimore	152,000	62,000
Federation of American Societies of Experimental Biology ..	15,425	--
The Genetics Society of America	1,402	--
USDA, ARS, Beltsville	438,000	340,000
Elena del Campillo	90,000	--
Eric W. Riddick	80,000	--
Subtotal	1,562,612	2,065,734
MASSACHUSETTS		
Amherst College	156,553	--
Beth Israel Hospital, Boston	179,000	--
Boston University	100,000	120,000
Boston University School of Medicine	73,000	--

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
Brandeis University	--	140,000
Harvard University	120,000	--
Marine Biological Laboratory	--	316,000
Massachusetts General Hospital	155,000	175,000
Massachusetts Institute of Technology	75,000	80,000
Northeastern University	180,000	--
Tufts University	713,922	213,580
University of Massachusetts	939,154	717,421
University of Massachusetts, Dartmouth	55,000	49,830
University of Massachusetts, Lowell	--	180,000
Samuel Beshers	--	80,000
Steven Roels	--	80,000
Karen L. Houseknecht	80,000	--
Joel A. Kreps	80,000	--
Subtotal	2,906,629	2,151,831
MICHIGAN		
Michigan State University	2,490,198	1,998,000
Michigan Technological University	10,109	386,700
Northern Michigan University	--	50,000
University of Michigan	348,000	148,100
University of Detroit, Mercy	50,000	--
Ronald Okimoto	--	80,000
Alice Wright	--	78,200
Ernest J. DeRoche	80,000	--
Subtotal	2,978,307	2,741,000
MINNESOTA		
University of Minnesota	1,567,431	2,137,304
Mankato University	61,698	--
John J. Weiland	80,000	--
Subtotal	1,709,129	2,137,304
MISSISSIPPI		
Mississippi State University	484,657	380,943
University of Mississippi	105,000	--
University of Mississippi, Medical Center	--	157,730
University of Southern Mississippi	57,081	272,510
Subtotal	646,738	811,183
MISSOURI		
University of Missouri	1,344,112	1,901,528
University of Missouri, St. Louis	125,000	--
Washington University	808,000	335,000
Saint Louis University	205,000	--
Southeast Missouri State University	33,456	--
Milton Thomas	--	80,000
Reginald J. Gaudino	80,000	--
Subtotal	2,595,568	2,316,528
MONTANA		
Montana State University	1,104,120	1,459,426
University of Montana	--	350,400
James Jacobs	--	60,000
Subtotal	1,104,120	1,869,826
NEBRASKA		
University of Nebraska	1,576,986	1,585,927
NEVADA		
University of Nevada	499,647	906,923
Desert Research Institute	107,000	--
Subtotal	606,647	906,923
NEW HAMPSHIRE		
Dartmouth College	250,000	60,000

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
University of New Hampshire	303,018	141,061
William Currie	--	80,000
David J. Westenberg	80,000	--
Subtotal	633,018	281,061
NEW JERSEY		
New Jersey Medical School	80,000	150,000
Rutgers University	1,323,237	1,211,751
University of Medicine & Dentistry of New Jersey	--	386,000
Olivia Harriott	--	80,000
Paul Silverman	--	79,400
Subtotal	1,403,237	1,907,151
NEW MEXICO		
New Mexico State University	535,000	--
University of New Mexico	8,575	--
Subtotal	543,575	0
NEW YORK		
Boyce Thompson Institute	100,000	275,000
Cold Spring Harbor Laboratory	397,000	550,000
Cornell University	3,448,128	4,210,659
Columbia University	195,000	--
Edmund Niles Huyck Preserve, Inc.	--	200,000
Health Research, Inc.	--	175,000
Institute of Ecosystem Studies, Inc.	--	9,120
State University of New York, Albany	906,450	310,000
State University of New York, Buffalo	50,000	350,169
State University of New York, Stony Brook	417,000	--
Syracuse University	--	196,700
University of Rochester	281,700	101,000
Lois Levitan	--	80,000
Rebecca W. Doerge	80,000	--
Tama C. Fox	80,000	--
Lawrence J. Zwiebel	80,000	--
Gernot G. Presting	80,000	--
Subtotal	6,115,278	6,457,648
NORTH CAROLINA		
Bowman Gray School of Medicine of Wake Forest University	102,000	222,000
Duke University	562,136	572,600
East Carolina University	--	141,769
North Carolina State University	3,106,073	2,337,143
University of North Carolina, Chapel Hill	100,000	214,703
University of North Carolina, Charlotte	50,000	--
University of North Carolina, Greensboro	24,319	--
Western Carolina University	90,000	46,555
Gregory Weber	--	80,000
Subtotal	4,034,528	3,614,770
NORTH DAKOTA		
North Dakota State University	868,725	932,923
University of North Dakota	110,000	147,810
University of North Dakota, School of Medicine	--	190,000
Sharon Clancy	--	80,000
Subtotal	978,725	1,350,733
OHIO		
Miami University	92,644	110,000
Ohio State University Agricultural Technical Institute	--	60,000
Ohio State University Research Foundation	974,582	812,700
Ohio University	219,000	105,000
Bowling Green State University	94,187	--
Case Western Reserve University	250,000	--

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
University of Dayton	--	220,000
University of Toledo	--	80,000
University of Cincinnati	130,000	--
Subtotal	1,760,413	1,387,700
OKLAHOMA		
Oklahoma State University	812,695	766,982
University of Oklahoma	160,000	95,886
University of Tulsa	43,715	53,827
Subtotal	1,016,410	916,695
OREGON		
Oregon State University	2,103,430	1,941,180
Portland State University	--	50,000
University of Oregon	120,000	5,000
USDA, Forest Service, Portland	400,000	--
Subtotal	2,623,430	1,996,180
PENNSYLVANIA		
Bloomsburg University	57,900	--
Bucknell University	50,000	--
Clarion University of Pennsylvania	--	49,509
Duquesne University	90,000	296,535
Food Microbiology Research Conference	--	6,000
Pennsylvania State University	1,928,637	887,423
University of Pennsylvania	150,000	960,000
Thomas Jefferson University	160,000	--
USDA, ARS	220,000	--
Jane Andrews	--	80,000
Subtotal	2,656,537	2,279,467
PUERTO RICO		
University of Puerto Rico	130,000	--
RHODE ISLAND		
Gordon Research Conference	--	53,500
University of Rhode Island	664,256	200,000
Karen M. Warner	80,000	--
Subtotal	744,256	253,500
SOUTH CAROLINA		
Clemson University	384,977	351,255
Francis Marion University	--	45,386
Medical University of South Carolina	--	180,000
University of South Carolina	340,885	249,000
Subtotal	725,862	825,641
SOUTH DAKOTA		
Augustana College	--	57,530
South Dakota State University	437,230	410,553
Subtotal	437,230	468,083
TENNESSEE		
East Tennessee State University	17,945	50,000
University of Tennessee	959,056	504,993
University of Tennessee, Chattanooga	34,017	--
Memphis State University	80,400	--
Vanderbilt University	275,264	433,000
James R. Strickland	80,000	--
Subtotal	1,446,682	987,993
TEXAS		
Baylor College of Medicine	367,000	125,000
Rice University	--	120,000
Southwest Texas State University	7,500	--
Southern Methodist University	70,000	70,000
Texas A&M Research Foundation	3,241,595	3,251,771

<u>State/Recipient</u>	<u>FY 1994</u>	<u>FY 1995</u>
Texas A&M University, Kingsville	101,791	--
Texas Tech University	122,000	221,000
The University of Texas at Dallas	--	50,000
University of Texas, Austin	467,000	451,474
University of Texas Medical, Galveston	130,000	--
University of Texas Health Center, Houston	90,000	--
University of North Texas	90,000	--
USDA, ARS	226,900	--
USDA, ARS Southern Plains Area, College Station	--	183,100
Daren Brown	--	80,000
Daryl Morishige	--	80,000
Jeffrey E. Herrick	66,500	--
Andrew J. Wood	73,700	--
Subtotal	5,053,986	4,632,345
UTAH		
University of Utah	180,000	429,000
Utah State University	350,000	205,000
Subtotal	530,000	634,000
VERMONT		
University of Vermont	121,070	219,000
VIRGINIA		
University of Richmond	--	49,997
Virginia Commonwealth University	--	205,000
Virginia Polytechnic Institute & State University	1,157,119	1,750,458
Old Dominion University	176,705	--
James Madison University	49,673	--
Subtotal	1,383,497	2,005,455
WASHINGTON		
University of Washington	1,797,200	480,000
Washington State University	2,757,600	2,596,742
Children's Hospital & Medical Center	130,754	--
Thomas J. Savage	80,000	--
Subtotal	4,765,554	3,076,742
WEST VIRGINIA		
West Virginia University	197,001	325,000
West Virginia Geological & Economic Survey	--	120,000
Subtotal	197,001	445,000
WISCONSIN		
Marquette University	90,000	
Medical College of Wisconsin	--	130,000
University of Wisconsin	--	68,512
University of Wisconsin, Madison	4,242,517	3,493,831
University of Wisconsin, Oshkosh	100,000	--
University of Wisconsin, Parkside	140,000	--
USDA Forest Service, Forest Products Lab, Madison	365,179	77,000
Tanya Falbel	--	74,000
George Heimpel	--	80,000
Karen Vagnoni	--	80,000
Stan T. Lebow	79,728	--
Subtotal	5,017,424	4,003,343
WYOMING		
University of Wyoming	571,853	154,998
Total	96,631,441	93,796,281
Federal administration (4%)	4,122,840	4,024,920
Small Business Act	1,484,222	1,931,962
Biotechnology Risk Assessment	357,121	321,321
Peer Panel Costs	475,376	548,516
Total	103,071,000	100,623,000

EPSCoR PROGRAM

Question: Last year, the Committee continued its directive that 10 percent of the Competitive research grant funds be used for the USDA-EPSCoR program - Experimental Program to Stimulate Competitive Research. Please provide for the record a list of eligible states and funding levels awarded under this program for each of the past two fiscal years and a list of the states that will be eligible for the program in FY 1996.

[The information follows.]

NATIONAL RESEARCH INITIATIVE

Funding for USDA EPSCoR

USDA EPSCoR States *	FY 1994	FY 1995
Alaska	\$312,500	\$147,000
Arkansas	532,299	1,112,080
Connecticut	1,220,729	816,789
Delaware	368,406	1,187,004
Hawaii	313,807	665,000
Idaho	597,711	1,057,836
Maine	360,483	567,194
Mississippi	646,738	811,183
Montana	1,104,120	1,869,826
Nevada	606,647	906,923
New Hampshire	633,018	281,061
New Mexico	543,575	0
North Dakota	978,725	1,350,733
Rhode Island	744,256	253,500
South Carolina	725,862	825,641
South Dakota	437,230	468,083
Vermont	121,070	219,000
West Virginia	197,001	445,000
Wyoming	571,853	154,998
Subtotal	11,016,030	13,138,851
US Territories and Possessions		
District of Columbia	157,000	434,978
Puerto Rico	130,000	0
Subtotal	287,000	434,978
TOTAL	11,303,030	13,573,829

* The list of USDA EPSCoR States is identical for FY 1996.

URBAN RESOURCES

Question: I note that on April 22, 1996 --Earth Day--, Secretary Glickman announced that the U.S. Department of Agriculture will award \$4 million for community-based environmental action in eight Urban Resources Partnership cities across the country. Participating USDA agencies include the Forest Service, the Natural Resources Conservation Service, and the Cooperative State Research, Education, and Extension Service --CSREES. Could you please tell us more about the Cooperative State Research, Education, and Extension Service's --CSREES's-- participation in the Urban Resources Partnership Initiative? What is the agency's role? How much funding is CSREES providing and what is the source of those funds?

Answer: CSREES's role is to provide educational programs in support of the Urban Resources Partnership through the system's state and county partners. Nationally CSREES is linked to Urban Resources Partnership through the agency's Extension Forester. This individual chaired the national committee during calendar year 1995.

Locally, CSREES's county agents are providing educational leadership in support of the Urban Resources Partnership. The most common disciplines associated with the Urban Resources Partnership are horticulture, ecology, and youth educators. These persons are generally trained in urban gardening or environmental education, and are well known and respected in their communities. The agents use their networks to promote and advertise the partnership objectives, and solicit project proposals. Some of their services include tutoring aspiring grantees in grant proposal writing and providing quality educational experiences to program volunteers. For example, in one project 38 youth were recruited for a park restoration project. Preceding the physical aspect of this project was classroom and field instruction in marine biology, entomology, water quality and forestry.

To date all of Extension's involvement in the Urban Resources Partnership is "in kind" services --staff, office space, supplies and equipment; and fringe benefits for a local Urban Resource Program Coordinator. Informal reviews suggest that once the local projects are selected Extension becomes the principal for project implementation. In New York City Extension calculates their annual contribution to the Urban Resources Partnership at \$133,000.

RESEARCH

Question: The Fiscal Year 1997 request proposes to eliminate funding for canola and hesperaloe research. Instead, \$650,000 is requested for Advanced Materials under Supplemental and Alternative Crops. Please indicate how this funding would be allocated, indicating the purpose and amount.

Answer: Funding for research and development would be focused on industrial crops. Funding would be provided for a comprehensive program including agronomics, materials characterization and product

development/marketing, as required, for the crops that are selected. The choice of crops for industrial product development would be based on the potential for collaboration and leveraging with other agencies such as Department of Defense and Department of Energy and those agencies' level of activity in relevant materials science, technology and/or product usage. Grants would be awarded competitively as determined by an interdepartmental committee, and administered under cooperative agreements that require cost sharing and allow maximum participation of the USDA departmental representative, as appropriate. Funds will not be earmarked for specific individual projects.

Question: The fiscal year 1997 request proposes four special research grants: \$1.615 million for global change; \$254,000 for the National Biological Impact Assessment Program; \$423,000 for rural development centers; and \$2.757 million for water quality. The National Biological Impact Assessment Program was not funded for FY 1996. What is the justification for this program?

Answer: Funds totaling \$254,000 were appropriated for the National Biological Impact Assessment Program --NBIAP-- in FY 1996. Access to information is critical for successful scientific research. The U.S. Department of Agriculture meets this need through a special communications program that has been developed by NBIAP to provide the public and private scientific community the latest information on regulatory requirements, safety compliance, available services and support, information on emerging issues, bibliographic literature, and directories to other sources of information. These information services are considered essential for maximization of investments in critical areas of agricultural research. This program has emphasized support for the agricultural and environmental biotechnology research community through an electronic bulletin board and database system that supports approximately 7,000 users.

Question: Why do you propose to continue funding for these special research grant categories? Why shouldn't research proposals in these categories compete for funding through the NRI as well?

Answer: These Special Research Grant programs focus on targeted problems in need of immediate solution and accelerate the adoption of appropriate technologies and sound agricultural practices. These highly mission-oriented programs require stable funding which cannot be achieved through the competitive NRI process. An example of such a project is the Global Change Special Research Grant which supports the development of the UV-B monitoring network. This network is designed to provide a climatology of UV-B radiation in the United States, which is complementary to similar networks in other parts of the world. The NRI complements the global change programs and other special research grants by providing new knowledge needed to carry out these programs.

Question: Please explain how the \$200,000 available for FY 1996 for critical issues under Improved Pest Control is being spent.

Answer: These funds have been allocated equally between animal and plant pest control. The funds allocated for animal pests have been awarded to two

universities for immediate work on the epidemiology, natural reservoirs and transmission of Vesicular Stomatitis virus. This particular disease caused very substantial economic losses for animal owners, especially cattle and horses, in the Western United States last summer and fall. There was great concern about the appropriateness of control measures because of the lack of information about the possible contribution of reservoirs of this virus from wildlife species. The two grants to the University of Arizona and Colorado State University are to support research and epidemiologic surveys that will define the possible role of wildlife vectors in the recurrent outbreaks of this disease and the mode of transmission between domestic livestock once it appears in this population. The two projects are inter-related and will include substantial collaboration with the USDA-ARS Arthropod-Borne Animal Disease Research Laboratory in Laramie, Wyoming, as well as field veterinarians from the USDA Animal and Plant Health Inspection Service, who will be involved in the survey work. The research is already in progress and we expect to have substantial new information by early fall of 1996 which can be shared with animal disease regulatory veterinarians at the October meeting of the U. S. Animal Health Association meeting in Little Rock, Arkansas. Funds allocated for plant pest control will be directed to the highest priority research needed to address the potato late blight disease. New strains of the late blight fungus, *Phytophthora infestans*, have caused major losses to potato and tomato producers in the United States and Canada since 1992. Major losses in both the field and in storage have occurred in all North American production regions. CSREES is consulting with knowledgeable scientists and industry representatives on the highest priority research needs for addressing the potato late blight disease. Based on these inputs, a request for proposals will be made for needed research from university scientists.

Question: Please explain what the EXPERT IPM Decision Support System is, how it was established and how the funds available for the system for FY 1996 are being spent. How will the FY 1997 funds proposed be allocated?

Answer: The Expert IPM Decision Support System developed by USDA, USEPA, and the Argonne National Laboratory is urgently needed to provide a seamless interface among existing pest management databases and models, so that this information can be used by decision-makers at the state and federal levels. This is not currently possible because the information is maintained at sites located across the country, making it difficult to obtain, access, and use. The Expert IPM Decision Support System will link these databases through the Internet and make them simple to access using point and click commands. Furthermore, tools for analyzing, evaluating, and understanding the information are provided with the same easy access, such as rule-based generation of pest management alerts and summary reports. As part of this effort distributed electronic survey software was developed and is currently being used to obtain pest management alternatives information. The electronic survey software has been distributed to all states and territories to collect data on the effectiveness of the alternatives in the respective states and territories. In fiscal year 1996, \$177,000 is being used to interface the information in the data bases, expand the utility of the program for other IPM needs, provide quality assurance, and reinforce state and federal partnerships. In fiscal year 1997, \$300,000 is requested for this activity. These resources will be

used to maintain the Expert IPM Decision Support System in USDA/CSREES for USDA pest management programs as a tool for decision making, and to continue development of the system with the Argonne National Laboratory. The details of the 1997 plan are being developed at this time and include resources for a Decision Support System Coordinator in CSREES, a programmer for input of data bases and management of Internet and World Wide Web servers, continued contract with Argonne National Laboratory for advanced development, and support for data base development, quality assurance, and for guidance committee activities.

Question: An increase of \$500,000 is proposed for Fiscal Year 1997 for a new Research, Education and Economics Information System. How will these funds be spent?

Answer: These funds will be used to plan, design, and develop a comprehensive, education, extension and economics information system to support future information-based research and education program planning, to serve as a primary reference source for the development of new research and education projects, to arm Federal/State policy makers with empirical program analyses, and to generate outcome and impact information needed to be fully responsive to the Government Performance and Results Act.

Question: Are you proposing to integrate current data base and other information systems or do you plan to replace these systems?

Answer: Current systems will be inventoried and the program and management needs of diverse users will be documented and prioritized. Once this has been accomplished we will be in a position to determine whether it will be more effective to enhance one or more current systems, totally redesign one or more current systems, add several new components or develop a system using a combination of these approaches.

Question: Will USDA's university partners have equal access to any electronic data system put in place by the Department?

Answer: USDA's university partners have participated in determining that a new comprehensive, integrated, user-friendly information system is needed to provide a credible, current, flexible and relevant knowledge base for the thousands of programs and projects for which they are responsible related to food, agriculture, natural resources, and rural development. These university partners will participate fully in developing the new system and will, of course, have full access to it.

Question: What are the estimated total costs of this initiative?

Answer: We currently estimate that it will cost a total of \$1.2 million to develop the new system. This includes the \$500,000 being requested in FY 1997. It will require about \$1.5 million a year to operate and maintain the new system. This compares favorably with the \$1.13 million a year that is currently required to

operate and maintain the Current Research Information System - one of the components that would be a part of the new system.

HIGHER EDUCATION

Question: You are proposing reductions to remove available carryover balances in USDA higher education programs. Please explain why there were carryover funds available at the end of FY1995 in each of the following higher education grant programs: graduate fellowships; institution challenge grants; and the multicultural scholars program.

Answer: The Cooperative State Research, Education, and Extension Service is closely monitoring its administrative funds. Carryover balances reflect federal administration funds not program funds available for award, carried forward to fiscal year 1996 and are being used to help alleviate the impact on agency operations of the \$24.6 million reduction in the CSREES appropriation from fiscal year 1995 to fiscal year 1996.

Question: Please explain the \$1.5 million that is being requested to establish a new Hispanic Education Partnerships Grant Program. Why is a separate program needed?

Answer: Although Hispanics represent 8.9 percent of the U.S. civilian labor force, few hold scientific and professional leadership roles in the food and agricultural sciences. Furthermore, the education pipeline is inadequate to overcome this problem since only about 2 percent of students in the food and agricultural sciences are of Hispanic origin. Developing USDA partnerships with institutions that serve primarily Hispanic students is an option to aid in increasing participation in food and agricultural sciences. This new USDA competitive grants program will expand and strengthen academic programs in the food and agricultural sciences at Hispanic-serving colleges and universities and stimulate cooperative efforts with other colleges, private sector entities, and state and Federal agencies. It would be based on the model of the teaching component of the 1890 Capacity Building Grants Program, which has proved to be a superior mechanism for enhancing partnerships with developing institutions. By strengthening the infrastructure of Hispanic-serving institutions, the Department can play a role in mainstreaming the development of Hispanic expertise in the food and agricultural sciences for agri-business and public-sector employment.

A separate program for Hispanic-serving institutions is needed for several reasons. These institutions do not yet have the resources and expertise in the food and agricultural sciences to compete on an equal footing with the 1862 land-grant colleges and universities in our Higher Education Challenge Grants Program, and most are ineligible, as 2-year colleges, for that program. Yet, as already outlined, Hispanic-serving institutions are key to developing our Nation's food and agricultural scientific and professional work force in the coming decades, for without reaching Hispanic populations we may not have the human capital necessary to maintain our world leadership. Further, and equally important, a

separate program will allow USDA to tailor awards to match the unique needs these institutions have in developing food and agricultural expertise.

1990 INSTITUTIONS

Question: The fiscal year 1997 request includes continued funding at the FY 1996 levels for the Native Americans Institutions' Endowment Fund and institution strengthening payments. The Equity in Educational Land-Grant Status Act of 1994 also authorized \$1.7 million for 1994 institutions capacity building grants and \$5 million for 1994 institutions extension programs. Why aren't you proposing funding to fully or partially fund these authorizations as well?

Answer: We believe that the current budget climate calls for making funding choices which best reflect national interests. It was decided that funding would be requested to continue support of the second year of the \$4.6 million Native Americans Institutions' Endowment Fund and the \$1.45 million institution strengthening program rather than to begin new programs. In a related program under separate authority, we are again seeking \$1.724 million to support Indian Reservation Extension agents.

EXTENSION ACTIVITIES

Question: The fiscal year 1996 request continues \$2.7 million in funding for rural health projects in Mississippi and Louisiana. Would you please give us a status report on each of these projects.

Answer: After three years of operation, the Mississippi Rural Health Corps--MRHC--has provided junior and community collages with educational opportunities for 1,014 students in the health care field. Nearly 90 percent of those enrolled--891 students--have either completed their courses of study or remained in training. Rural health educational activities, such as sponsoring of county/community health fairs and providing health screening and referral services, of the Mississippi Cooperative Extension Service have been very effective in raising rural residents' awareness of health care needs and available services. In several communities, transportation assistance to health care services has been organized with community and multi-agency support. Through the combined efforts of the Coahoma County Coalition, the Friar's Point Community Health Center has been established. The center provides physician services five days a week to this community of 1,500 residents which had been without physician services for two decades and which previously had no transportation services to help residents travel to other health care facilities. In Louisiana, the project at Southern University in Baton Rouge, has established a rural health education and outreach initiative in collaboration with Southeastern University in Hammond, Louisiana and Our Lady of Lake Hospital in Baton Rouge. This initiative focuses on improving community-based primary health care services for at-risk populations residing in medically underserved rural and inner-city neighborhoods in South Louisiana. The project provides a nurse-managed rural health care clinic, including a mobile clinic to serve these neighborhoods. The Southern University Cooperative Extension Program--SUCEP--serves as the catalyst for bringing

communities together to facilitate project entry into designated parishes, and to extend the education component of the project to other parishes in the State of Louisiana.

Question: The fiscal year 1997 request proposes a \$4.217 million increase for Pest Management above the fiscal year 1996 funding level of \$10.783 million. Would you please describe your current activities in this area, what activities are being funded, and the reason why such a significant funding increase above the FY 1996 level is needed.

Answer: The additional \$4.217 million in Pest Management funds will be coordinated with a \$4.2 million increase requested in the budget for Integrated Pest Management and Biological Control --PL89-106 Special Grants-- to jointly support approximately 16 IPM development and implementation projects at up to \$500,000 per project per year for up to 6 years, with a mandatory mid-point review. Proposals for development and implementation team projects will be solicited through a request for proposals and awarded based on a competitive peer review process. These projects represent the core of the USDA IPM Initiative, which is focused on implementing IPM methods on 75 percent of crop acres over the next six years. These implementation projects will demonstrate new IPM technologies and assess the economic and environmental impacts of these technologies through on-farm demonstrations and validation trials conducted on a production region basis. The validation and impact studies will be used to demonstrate to farmers the economic and environmental benefits of adopting new IPM technologies. It should be emphasized that the increase in the IPM and Biological Control --research-- and the Pest Management --extension-- funding lines above the fiscal year 1996 level will support the research validation, extension education, and technology transfer activities essential to successfully achieving the implementation goals of the IPM Initiative.

The base \$10.783 million program supports the extension component of the IPM multidisciplinary research and extension programs foundation in each state. These multidisciplinary research and extension team efforts are facilitated by state IPM coordinators and IPM specialists. The State IPM coordinators are the focal points for development and implementation of new IPM technologies within the state and region. Pest Management funds also support IPM education and technology transfer specialists who facilitate the transfer of new IPM technologies to farmers via the Extension Service networks in every state. These education networks utilize clinics, workshops, conferences, validation and demonstrations, field days, seminars, and a wide variety of publications and video productions.

We have requested a significant increase in the fiscal year 1997 budget for Pest Management because we are firmly committed to supporting the coordination and education programs needed to develop and deliver science-based solutions to the pest control problems encountered by farmers in the United States. The Pest Management budget is a key part of an overall Departmental IPM Initiative to help farmers use new pest management practices that meet agricultural production, human health, and environmental goals.

Question: The fiscal year 1997 budget proposes to reduce Farm Safety \$1.955 million to eliminate funding for AgrAbility projects. Why? Would you please describe what activities are being supported by the Farm Safety Funds, and how these funds are allocated.

Answer: In just four years the AgrAbility project has provided on-farm assistance to over 2,500 farmers with disabilities, and educated over 11,000 agricultural, rehabilitation, and health professionals on safely accommodating disability in agriculture. More than two million people learned of the project at a thousand agricultural or health-related events. While the AgrAbility project has been successful, we feel the state Extension Services can continue these projects through the use of Smith-Lever sections 3b and 3c formula funds and non-Federal resources.

The activities supported by this funding in fiscal year 1996 include \$1,829,710 in competitive special projects to support the National AgrAbility Project with Purdue University and the National Easter Seal Society and 18 state/regional AgrAbility projects in Colorado, Illinois, Indiana, Iowa, Kentucky, Minnesota, Missouri, Montana/Idaho, Nebraska, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, and Wisconsin.

The high incidents of injury, occupational illness and disability in agriculture, combined with new State and Federal government regulations requiring a wide range of training in farm safety hazards, are increasing the demand for CSREES supported farm safety extension programs. All 50 states and Puerto Rico each receive \$18,734 in fiscal year 1996 to support farm safety extension programs developed by the State Extension Service staff to meet the State's most critical needs. These programs are targeted at reducing the injury, illness and mortality rates of farmers/ranchers, seasonal and migrant agricultural workers, timber harvesters, and their families.

SUSTAINABLE AGRICULTURE RESEARCH, EDUCATION AND EXTENSION SERVICE

Question: How was the \$3.463 million provided for sustainable agriculture for fiscal year 1995 spent? What projects were carried out with these funds?

Answer: Chapter 3 funds were distributed to four regions for training and education projects, and the National Agricultural Library for the Alternative Farming Systems Information Center and the Sustainable Agriculture Network, and for the administration of projects. Listed below are 33 projects funded in fiscal year 1995: All of these projects contribute to technology transfer through providing professional development for extension educators and other agricultural advisors. Technology is transferred to general public through field tours, demonstrations, extension publications and presentations and published technical reports.

SARE FY 1995 CHAPTER 3 PROJECTS

NORTH CENTRAL REGION		\$693,806
1.	Developing Educational Materials and Schools for Sustainable and Profitable Grazing Systems	Ohio State University \$92,100
2.	Comprehensive Educational Program for "Training the Teachers" in Sustainable Agriculture	University of Minnesota \$158,400
3.	Increasing Trainer Literacy in Sustainable Agriculture	University of Nebraska \$10,000
4.	Building Collaboration Partnerships with Farming Systems Research and Education	Iowa St. University \$20,680
5.	Quality of Life Module for Extension Professional Development	University of Wisconsin \$38,580
6.	Life after CRP	University of Minnesota \$30,000
7.	Experiential Co-learning for Professional Development in Sustainable Agriculture	Purdue University \$60,040
8.	Local Sustainable Agriculture Team Building: A Sustainable Agriculture Training Model	University of Michigan \$30,000
9.	Grants to States for Strategic Plan-Implementation \$15,000	\$195,000
Administrative costs		\$59,006
NORTHEAST REGION		\$693,806
1.	New York State Cover Crop Symposium to Address the Needs of Extension Faculty and Staff	Cornell University \$5,700
2.	Information Management Training, Data Reduction, and Evaluating Methods to Improve Delivery of Whole Farm Integrated Crop and Pest Management--ICM/IPM	Rutgers University \$59,508
3.	New England Extension Sustainable Agriculture Training Program	University of Vermont \$119,613

4.	A Video Training on Cultivation Featuring Talented Farmers and Their Weed Control Machines	University of Vermont \$14,560
5.	Education of Extension Workers in Sustainable Agriculture Practices Utilizing the PASA Conference and Farm Visits	Pennsylvania State University \$35,000
6.	On-Farm Research and Extension Education Program	Penn St. University \$90,373
7.	Farming in Northeast Communities: An Integrated Approach to Planning for the Future	Cornell University \$121,732
8.	Whole Farm/Whole Watershed Planning for Sustainable Agriculture	University of New Hampshire \$13,500
9.	Promoting Sustainable Agriculture Through a Systems Approach	Rutgers University \$27,098
Grants to States for Strategic Plan- Implementation \$10,000		\$130,000
Administrative cost		\$76,722
SOUTHERN REGION		\$693,806
1.	Southern Region Sustainable Agriculture Training Consortium --Administration and Coordination--	North Carolina State University \$163,446
2.	Facilitating Farmer to Farmer Networks: An Experimental Approach	University of Florida \$80,997
3.	Sustainable Agricultural Marketing through Collaborative Policy Development	University of Kentucky \$40,900
4.	Sustainable Small-Scale Agricultural Development Training Project	University of Louisiana \$25,701
5.	Southern Gathering on Agricultural Problem-Solving	University of Kentucky \$52,000
6.	Management Intensive Grazing: Foundation of Sustainable Agriculture in the South	Southwest Louisiana University \$33,762
7.	State Implementation Plans-\$10,000 will go to each land grant institution in the region.	North Carolina State University \$290,000

WESTERN REGION**\$585,806**

- | | | |
|----|---|---|
| 1. | Educational Video on Watershed Management Practices for Pinyon-Juniper Ecosystems | South Central Resource Conservation & Development
\$24,000 |
| 2. | Sustainable Noxious Weed Management on Northeastern Rangelands | Montana State University
\$43,000 |
| 3. | Agency Personnel Training in Riparian Monitoring and Management of Wildlife and Livestock in the Intermountain West | Montana State University
\$98,000 |
| 4. | Sustainable Integrated Range Livestock and Crop Production System | University of Nevada
\$106,720 |
| 5. | Sustainable Agriculture Training Project: A Model of Collaborative Learning | Alternative Energy Research Organization
\$31,450 |
| 6. | A Consortium-Based Sustainable Agriculture Training Program --SAIP-- Curriculum Plan | University of California
\$20,000 |
| 7. | Video Introduction to Sustainable Agriculture for Eight Western States | University of Wyoming
\$20,000 |
| 8. | Grants to States for Strategic Plan-Implementation \$12,000 each --Also includes some administrative costs-- | Utah State University
\$204,000 |

Other administrative costs

\$38,636**National Programs and Expenditures**

- | | | |
|----|--|-------------------------------------|
| 1. | Video | University of Ohio
\$250,000 |
| 2. | National Liaison Activities | Iowa State University
106,631 |
| 3. | Marketing Project | University of Nebraska
\$168,000 |
| 4. | NACAA Extension Training | University of Minnesota
\$7,600 |
| 5. | Train the Trainer-Sustainable Agriculture in the Century | University of Minnesota
\$4,025 |
| 6. | CEEFAR Organizational Meeting | University Of Minnesota
\$5,000 |

7.	New Opportunities, New Technologies	Purdue University \$8,000
8.	Workshops and Special Projects	\$108,000
	Agency Overhead 4%	\$138,520
	Total	\$3,463,000

Question. The fiscal year 1997 budget proposes to eliminate \$6.520 million in federal administration projects funded for fiscal year 1997. Please provide a description and status report on each of the projects currently being funded.

Answer. [The information follows:]

Technology Transfer Projects --OK, MS--

This project involves the transfer of uncommercialized technologies from Federal laboratories and universities to rural businesses and communities which also include small, rural manufacturing firms. Rural businesses in Oklahoma and Mississippi need access to state-of-the-art technology in order to remain competitive in world markets and to level the playing field vis-a-vis world competition from Japan, Germany, etc. The original goal was to tap technology from Federal labs in order to help solve US industry and local government problems. Specifically, Mississippi Extension Service has demonstrated microcomputer technology and its applications to small town and rural county government; has introduced new technologies associated with value added processing and marketing for small businesses and industries through the Food and Fiber Center; has demonstrated features of national databases and federal laboratory technology; has extended cotton modeling programs developed by ARS, and has studied the feasibility of expanded food processing as a rural development initiative. Oklahoma State Extension Service has worked with rural small businesses and industry groups, including Rural Enterprises Inc., as well as local governments to identify priority technology needs and solve technical problems. The project started in 1984 and a total of \$4,345 thousand--including \$326 thousand for fiscal year 1996--has been appropriated. There were no non-federal funds for this project.

Pilot Technology Project --WI--

This project involves support for economic development in Wisconsin through direct assistance to small and medium sized manufacturers. The assistance takes the form of consultation to solve organizational, managerial, and technological problems through the application of improved technology. The University of Wisconsin-Stout has overall responsibility for the Northwestern Manufacturing Outreach Center program of work, staff, and fiscal management. In coordination with the National Institute of Standards and Technology-- NIST-- Manufacturing Technology Center, Stout conducts pre-assessments, plans technical seminars, and directs and coordinates the activities of project managers

who conduct in-plant extension activities. Staff perform preliminary assessments, and serve as proactive brokers of services available through the State's technical colleges, university system, private institutions of higher education, private consultants, federal laboratories and NIST Manufacturing Technology Centers. Staff work with CES and Technical Colleges to identify appropriate staff to participate in industrial assessments and in-plant extension projects. Staff provide technical information to manufacturers and offer experienced referral assistance. The project started in 1992 and a total of \$823 thousand--including \$163 thousand in fiscal year 1996--has been appropriated. No non-federal funds have been provided to this project.

Rural Rehabilitation --GA--

The original goal of this program was to prove that distance learning can be an effective tool for teaching and specifically for teaching functionally illiterate adults in rural areas. The program has tested the feasibility of providing satellite-based adult literacy education, in association with vocational rehabilitation services, to handicapped adults in rural Georgia. The program has developed curricula, tested and adapted technology, established student recruitment and retention strategies, expanded to Statewide coverage, and provided successful adult literacy education. The program now enrolls over 600 students per quarter, with approximately 70 percent expected to complete the full eight quarters of literacy education. Over the past seven years, test scores and attendance rates of students in the satellite-based program have shown that distance learning is an effective delivery system for instructing low-level readers and non-readers. Test scores and attendance rates of students in this program have been comparable to those of traditional urban classes. The project started in fiscal year 1989 and a total of \$1,893 thousand --including \$246 thousand for fiscal year 1996--has been appropriated and an additional total of \$5,378 thousand of non-federal funds have been provided.

Income Enhancement Demonstration --OH--

Federal funds support the Agricultural Business Enhancement Center which assists the agricultural sector of Northwest Ohio. The Center provides a variety of management training programs, helps farms and other agribusinesses develop comprehensive business plans, and facilitates business networking. It assists farmers and other agribusiness firms to implement effective strategies to adapt to a large number of major changes affecting the entire food system from the farmer to the consumer. These include changes in farm programs, globalization of markets, new technologies, and information systems, consumers' concerns for food safety and nutrition, and society's concern for protecting the environment. Project leadership and data analysis is being provided by the Department of Agricultural Economics at Ohio State University. The program has provided a large number of educational programs and a variety of analyses for local people. The Toledo Farmers Market has been revitalized and expanded. The feasibility of several value-add ventures have been analyzed. Business relationships have been established with firms in Eastern and Central Europe. Management expertise has been increased through a number of workshops. The current agreement with Ohio

State University Extension provides funding through June 1997. The program started in fiscal year 1991 and a total of \$1,391 thousand--including \$246 thousand for fiscal year 1996--has been appropriated. An additional \$296 thousand non-federal funds have been provided by the State of Ohio.

Rural Economic Development through Tourism --NM--

The REDTT Project is organized at multi-county and county levels, with the Cooperative Extension Service --CES-- of New Mexico State University providing significant leadership at both levels. This is a pilot project to create tourism training programs assisting in rural tourism development through training, capacity building, and the implementation of a comprehensive tourism marketing strategic plan. Tourism development is a form of economic development of interest to rural areas such as the REDTT area in New Mexico. REDTT products include a video, a public relations program, an image study, a regional tourism map and guide for one county, a regional tourism bus package, festival planning workshops, development of regional ag tour, and development of mini-grants funding program. The program started in fiscal year 1992 and a total of \$1,147 thousand--\$227 thousand in fiscal year 1996--has been appropriated. A total of \$78 thousand State matching funds have also been provided.

Rural Development --NE--

The Nebraska Cooperative Extension Service, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln, supports a small business information and technical assistance center which works with small scale, independently owned business within the State of Nebraska. The activities of the Center were focused primarily on rural retail operations until 1992. Since this date, the major thrust of educational efforts and technical assistance has been directed to value-added processing of agricultural products and small agri-business firms with the Center for Rural Community Revitalization providing economics planning assistance.

The earliest work of the Center tagged "Managing Mainstreet," conducted a total of 72 workshop series in 67 communities to help merchants improve profitability and increase sales. These workshops were attended by 1,341 business owners/managers and represented 642 businesses. The current thrust in entrepreneurship and business development has successfully assisted the start up of 111 new businesses in the state during the past two years. At any given time, 40 to 60 firms are being assisted. Currently, program funds are targeted for expanding entrepreneurial services to small and start-up firms. The project has been operating since October 1978, and federal appropriations through fiscal year 1993 were \$1.74 million. For fiscal years 1994, 1995, and 1996, \$400 thousand was appropriated--\$386 thousand of which was for FY 1996. All federal funds have been matched by an equivalent amount of non-federal funds each year of operations through fiscal year 1995 and the fiscal year 1996 non-federal funding level was \$99 thousand.

Rural Development --OK--

This is a technology-based economic development program that seeks to promote job growth, business development, and rural entrepreneurship through business assistance, technical assistance, business incubators, and new business financing. Commercial product fairs are held each year showcasing inventions by entrepreneurs from rural areas. The original goal was to assist rural business in Southeast Oklahoma to get access to technology, financial, and business management assistance. Thus far, Rural Enterprises has expanded the incubator service area, stimulated innovation through participation in the New Product and Process Fair and other regional innovation fairs, assisted in plant expansion, and continued to develop linkages through extension at Oklahoma State University and Langston University, as well as already established linkages in the REI service area. The project has been in place since fiscal year 1988 and total appropriations have been \$4,223 thousand--\$296 thousand in FY 1996. No non-federal funds have been provided.

Beef Improvement --AR--

The original goal of the Arkansas Beef Improvement Program was to enhance the profitability and efficiency of Arkansas cattle producers. The project addresses primarily local needs by setting goals, and evaluating resources and selecting the management practices that will help the cattle producer achieve those goals in the decision-making process. A second aspect of the program is to inform all Arkansas cattle producers of the knowledge gained from the program. Accomplishments to date include the establishment of demonstration farms, collection of benchmark data which includes soil tests, production information, forage analyses and budgets and renovation of pastures to increase grazing capacity. Identification of mineral deficiencies in beef cattle have been detected and corrected through proper supplementation and ration balancing. Use of a cow-calf enterprise budget has helped the producers identify both efficient and inefficient management practices and take corrective actions. The program started in fiscal year 1993 and the total appropriated to date is \$736 thousand--\$197 thousand of that in fiscal year 1996. The State has provided \$95 thousand total.

Integrated Cow/Calf Management --IA--

This program, also known as "CHIPS" is an integrated cow-calf resource management program which seeks to affect the rural economy of an eleven-county area in southeast Iowa by maximizing the profit potential of the area's cattle industry. This area of Iowa contains extensive areas of marginal lands which are highly erosive land and should not be extensively farmed with row crops. CHIP's long-term sustainable approach supports cow-calf production on this marginal land and provides one-on-one assistance as economic and production decisions are made. The overall goal of CHIPS is to have a positive effect on the area's economy by improving the long-term profit potential of the local cattle industry. Over 130 cooperators, involving approximately 10,500 beef cows, are currently enrolled and participating in the CHIPS program. Four full-time technicians and one half-time specialist have conducted over 500 farm/office consultations during

fiscal year 1995 to develop specific on-the-farm recommendations and to assist with the problem solving and decision-making process. These contacts involve a wide variety of technical assistance, with primary emphasis on nutrition, cost-effective ration development, genetic evaluation, value added practice, and cow production concerns. Over 40 cooperators have incorporated another program, CHAPS, Program and Beef Cow Business Record in their operations. During fiscal year 1995, more than 2000 head of breeding animals were permanently identified to facilitate record and data collection. Over 250 forage samples were collected and analyzed, with the information being utilized in individualized ration recommendations.

This program has been underway since fiscal year 1992 and \$1,307 thousand total has been appropriated--\$345 thousand of that for fiscal year 1996. CHIPS participants pay client fees of approximately \$3.00 per cow. This fee structure is on a sliding scale which adjusts for cow herd size. To date, approximately \$45,000 has been collected from CHIPS cooperators.

Small Farm Management and Education Project --AR--

This program, which is regional in scope, develops, refines, and validates technology for family farm production systems that enhance biological and economic efficiencies and product qualities of the Ozark Highlands in the south central United States. The applied research and extension programs help small farmers in the region improve their production efficiency, minimize risk, combine enterprises to make more efficient use of labor and equipment, and improve family record-keeping systems. Accomplishments include the development of a computerized farm management recordkeeping system designed to assist producers regionally and nationwide to better manage farms and enhance profitability. The program has an environmental component and has been highlighted in media across the region. Assistance on enterprise planning, production, harvesting, and marketing of alternative crops has been provided to customers in 15 states and two foreign countries. Program personnel have worked with commodity organizations and other groups to form a network that delivers comprehensive programs on sustainable agriculture to end-users. The current funding supports work through February 1997. In keeping with the Administration's policy of awarding research grants competitively, no further federal funding is requested for this grant. This project began in 1992 and total appropriations to date were \$499 thousand--\$99 thousand of this in fiscal year 1996. Total State matching funds were \$278 thousand.

Rural Center HIV/STD Prevention --IN--

This program created the Rural Center for the Study and Promotion of HIV/STD Prevention jointly between Indiana University and Purdue University, Indiana. HIV/STD are becoming increasingly serious in small towns and rural areas. The Center has been involved in the development and evaluation of educational material designed to reduce HIV/STD risk behavior and incidence in rural areas and in the compilation of information on the incidence and costs of rural HIV/STD, including an analysis of selected HIV/STD-related determinants or

rural adolescents, adults, and migrant workers. Activities in fiscal year 1996 include the development of computer software and peer educational material; expansion of the Prevention Resources Library; analysis of selected HIV/STD-related determinants of rural adolescents, adults, and migrant farm workers; needs assessments of women and children with HIV; modeling of the HIV epidemic; and caregiver/persons with AIDS/community linkages. While the work being done through the project is making a valuable contribution to rural health research and education, the USDA believes that the project should be supported by the National Institutes of Health or another office of the U.S. Department of Health and Human Services. There is no comparable work being done elsewhere within USDA. Since the program was begun in fiscal year 1994, \$746 thousand has been appropriated--\$246 thousand in FY 1996--and the total of non-federal funds is \$229 thousand.

Delta Teachers Academy

The Delta Development Commission report to Congress in 1990 stressed the severe educational needs of teachers in the Lower Mississippi Delta Region. It cited poor student performance, one of the highest illiteracy rates in the country, and demoralized teachers who had little or no opportunity for substantive academic development. The original goal of the project remains to provide academic and professional development for elementary and secondary teachers in the seven-state region of the Lower Mississippi. The Academy began by offering educational development activities for 100 teachers from more than 50 rural school districts at 10 sites across the seven states. Training has now been expanded to include 630 teachers at 39 sites, with plans to add one additional site serving 15 new teachers for fiscal year 1996. The project has improved teacher recruitment and retention in the region. A total of \$9,811 thousand have been appropriated for this project--including \$3,876 thousand in fiscal year 1996--and non-federal funds were not provided.

Wood Biomass --NY--

The objective of this program is to expand, implement, and gain acceptance of wood biomass as a sustainable, renewable, and environmentally-friendly fuel source. The goals of this project are to promote, via applied research and technology transfer, wood biomass for energy as an alternative farm product; the wise stewardship of land resources; the use of domestic, renewable and sustainable energy; and enhanced farm profitability. To accommodate this, scientists at SUNY have located and are developing a management plan for 100 acres of private property. This draft plan calls for site preparation in the Spring and Summer of 1996 and the planting of tested willow cultivars in the Spring of 1997. At Cornell University, a person has been hired to coordinate technology transfer resulting from this and predecessor projects. Electronic and print media allows Cornell's technology transfer activities to extend far beyond that point, thus the scope of this project has local, state, regional, national, and international implications. The program began with the appropriation of \$200 thousand in fiscal year 1995 and fiscal year 1996's appropriation is \$197 thousand.

Range Policy Development --NM--

The purpose of the "Range Livestock Interactions and Policy Development" project is to evaluate the importance of the rangeland resources to the economic structure of New Mexico counties and to the state as a whole. The grant request states that in New Mexico, and throughout the Western States, local economies are frequently tied to the use and management of public range and forest lands. By describing how local industries provide tax revenues to federal, state, and local governments, we may be better prepared to estimate the impacts of proposed legislation and to craft policies that will enhance, rather than detract, from local economies. Data from state and county tax receipts and revenues will be used to describe a detailed input/output model for each county and for the state. Inputs are county/state resources that are used by the "productive industries"--e.g. ranching, mining--including county/state infrastructure--transportation and communication networks, schools, health, and other social services, etc. Outputs are understood to include both primary and secondary revenues supported by those same industries, including payroll and taxes paid, and their resultant impacts on various levels of government. Analysis of individual county sources of revenues and costs are to be modeled for use in assessing the impacts of existing and potential policy decisions. This project was initiated in fiscal year 1994 and is scheduled for completion at the end of fiscal year 1996. It is fully funded through federal appropriation and total appropriations to date are \$591 thousand--\$197 thousand in fiscal year 1996.

1890 RESEARCH AND EXTENSION FACILITIES PROGRAM

Question: The FY 1997 request proposes a \$3.925 million reduction in funding for 1890 facilities. Please identify the projects, by institution, which were funded in FY 1994, 1995; as well as the projects which are proposed to be funded in fiscal years 1996 and 1997. Please indicate the total cost and status of each project. In addition, identify the carryover funds which have been available at the end of each fiscal years 1991 through 1996. Why haven't these funds been spent?

Answer: The FY 1996 appropriation and FY 1997 Budget Request are both \$7.782 million for the 1890 Research and Extension Facilities program. However, because of carryover funds from FY 1995 and prior years, \$11,706,685 is available for obligation in FY 1996 resulting in a \$3.925 million decrease in FY 1997.

The program authorized in Section 1447 of P.L. 95-113 as amended, was initiated in FY 1993. Table I identifies the amount of funds that have been available each fiscal year to each institution. Table I also provides a brief description of the institutions respective projects to be supported through this program. Each institution was required to submit a 5-year plan for their funds which was approved by the agency. Since these are no-year funds the agency can make the funds available to the states as needed depending on the status of planning, design or construction as well as the availability of other funding sources or requirements under the laws of the respective States as regards to having all funds available before work can begin.

Table II identifies by institution the amount of carryover funds available at the end of fiscal years 1993, 1994, and 1995.

TABLE I

1890 RESEARCH AND EXTENSION FACILITIES PROGRAM

Institutions	Funded in FY 1994	Funded in FY 1995	Funded in FY 1996	Proposed FY 1997 Funding	Total including FY 1993	Status
ALABAMA Alabama A&M University	427,902	422,607	422,607	416,242	2,105,600	Satellite downlinking, laboratory equipment purchases, and laboratory renovations have been completed. The construction of the joint Research/Extension Conference Center is pending.
Tuskegee University	427,902	422,607	422,607	416,242	2,105,600	The construction of the cupreine research facility and the replacement of Campbell Hall roof has been completed. The renovation of the food processing laboratories and the construction of the Extension Activities Center are not completed.
ARKANSAS University of Arkansas at Pine Bluff	411,011	405,926	405,926	399,812	2,022,487	Equipment has been purchased and two laboratories have been renovated. State approval to begin construction designs will be obtained by August 15, 1996 and construction award will be completed by October 1, 1996.
DELAWARE Delaware State College	328,626	324,560	324,560	319,672	1,617,090	Installation of food storage and handling system is completed and mobile teaching units have been purchased. An architect has been selected. Construction is scheduled to start in the Fall of 1996. State requires all funds to be available prior to construction.

TABLE I

1890 RESEARCH AND EXTENSION FACILITIES PROGRAM

Institutions	Funded in FY 1994	Funded in FY 1995	Funded in FY 1996	Proposed FY 1997 Funding	Total including FY 1993	Status
FLORIDA Florida A&M University	433,080	427,721	427,721	421,279	2,131,080	Furniture & equipment for distant education programs have been acquired, youth pavilion has been constructed, entomology labs have been renovated and equipped. The construction of farm shops & equipment shed are in the planning phase. State requires all funds to be available prior to construction.
GEORGIA Fort Valley State College	475,719	469,833	469,833	462,757	2,340,899	Office equipment has been purchased. 5-year plan has been amended to include additional state funds for this project. Therefore, construction has not begun.
KENTUCKY Kentucky State University	527,216	520,692	520,692	512,850	2,594,300	Construction has not begun. The state requires all funds to be available prior to construction.
LOUISIANA Southern University and A&M College	402,328	397,350	397,350	391,365	1,979,758	Construction has not begun. The 5-year plan was submitted in FY 1995 and has not been approved.
MARYLAND University of Maryland-Eastern Shore	378,113	373,433	373,433	367,809	1,860,597	Construction has not begun. The state requires all funds to be available prior to construction.
MISSISSIPPI Alcorn State University	415,862	410,717	410,717	404,531	2,046,358	Construction has not begun. The FY 1993 awards has not been accepted by the institution and the FY 1994, 1995, or 1996 proposals have not been submitted.

TABLE I

1890 RESEARCH AND EXTENSION FACILITIES PROGRAM

Institutions	Funded in FY 1994	Funded in FY 1995	Funded in FY 1996	Proposed FY 1997 Funding	Total including FY 1993	Status
MISSOURI Lincoln University	525,008	518,512	518,512	510,702	2,583,436	Renovation of Allen and Foster Halls (office space for the Extension and Research staffs, respectively), has been completed. Design & construction for the beef/cattle facility and the multipurpose building will begin in July 1996.
NORTH CAROLINA North Carolina A & T State University	541,590	534,886	534,886	526,830	2,665,022	Downlinking equipment and office furniture has been purchased. The architect defaulted on the original contract. The construction has been delayed and the 5-year plan amended.
OKLAHOMA Langston University	423,505	418,263	418,263	411,963	2,083,957	The design development for the infrastructure (roads & utilities) should be completed by July 1996. Construction has not begun. The state requires all funds to be available prior to construction.
SOUTH CAROLINA South Carolina State College	418,443	413,265	413,265	407,041	2,059,055	Distance education center will be fully equipped by July 1996. The renovation design for the 4-H camp has been completed. Construction is scheduled to begin in June 1997.
TENNESSEE Tennessee State University	482,216	476,248	476,248	469,075	2,372,862	Construction has not begun. The 5-year plan was submitted in 1996 and has not approved.

1890 RESEARCH AND EXTENSION FACILITIES PROGRAM

Institutions	Funded in FY 1994	Funded in FY 1995	Funded in FY 1996	Proposed FY 1997 Funding	Total including FY 1993	Status
TEXAS Prairie View A&M University	604,822	597,336	597,336	588,339	2,976,172	Office, audio-visual, and research maintenance equipment has been purchased. Irrigation system, security fence, and waste disposal system will be installed by December 1996. The architectural design for the Family Development Center will begin June 1996.
VIRGINIA Virginia State University	456,657	451,004	451,004	444,211	2,247,087	Parking lot for the Multi-purpose Pavilion has been completed. Diagnostic laboratory furnishings and satellite downlinking equipment has been installed in the Pavilion. Renovation of the meat goat handling & housing facilities will begin in June 1996. A filed emission scanning electron microscope will be purchased with 1997 funds.
Federal Administration	320,000	316,040	316,040	311,280	1,574,640	
TOTAL	8,000,000	7,901,000	7,901,000	7,782,000	39,366,000	

TABLE II

1890 EXTENSION RESEARCH FACILITIES PROGRAM
Available Carryover Funds
 --Unobligated Funds--

Institution	FY 1993	FY 1994	FY 1995	Comments on Carryover
Louisiana Southern University and A&M College	402,328	397,350	397,350	CSREES is working with the University to develop an acceptable 5-year plan.
Mississippi Alcorn State University	415,862	410,717	410,717	FY 1993 award has not been signed and returned to CSREES; FY 1994, 1995, & 1996 proposals have not been submitted.
Tennessee Tennessee State University	482,216	476,248	476,248	CSREES is working with the University to develop an acceptable 5-year plan.

NOTE: Fiscal year 1996 proposal are scheduled to be reviewed in June, 1996 and awarded in July, 1996. Difference of \$55,649 between SF-133 and actual unobligated funds due to year-end estimates.

EFNEP

Question: Would you please provide a description of the projects being funded through the Expanded Food and Nutrition Education Program --EFNEP?

Answer: EFNEP funds are distributed to states based on a formula that takes into consideration the proportion of their population that is at or below 125 percent of poverty.. EFNEP operates in all 50 states, the District of Columbia, and the territories of American Samoa, Guam, Micronesia, Northern Marianas, Puerto Rico and the Virgin Islands. It is designed to assist limited resource audiences in acquiring the knowledge, skills, attitudes and changed behavior necessary for nutritionally sound diets and to contribute to their personal development and the improvement of the total family diet and nutritional well-being.

The delivery of EFNEP youth programs takes on various forms. EFNEP provides education at schools as an enrichment of the curriculum, in after school care programs, through 4-H EFNEP clubs, day camps, residential camps, community centers, neighborhood groups, and home and community gardening workshops. Youth are taught lessons on nutrition, food preparation and food safety, and physical fitness.

Through an experiential learning process, adult program participants learn how to make good choices to improve the nutritional quality of the meals they serve their families. They increase their ability to select and buy food that meets the nutritional needs of their family. They gain new skills in food production, preparation, storage, safety and sanitation, and they learn to better manage their food budgets and related resources such as Food Stamps. EFNEP is delivered as a series of 10 - 12 or more lessons, often over several months, by paraprofessionals and volunteers, many of whom are indigenous to the target population. The hands-on, learn-by-doing approach allows the participants to gain the practical skills necessary to make positive behavior changes. Through EFNEP, participants also learn self-worth -- that they have something to offer their families and society.

EFNEP is a program that works; in 1994, 87 percent of adult participants showed improvement in one or more food resource management practices, 92 percent showed improvement in one or more nutrition practices and 69 percent showed improvement in one or more food safety practices. At entry, only 17.2 percent of the participants has a diet that provided even half the recommended number of servings of breads and cereals and at least one serving from each of the other food groups. At exit, 42.5 percent of the participants had achieved this minimal level of intake.

AG TELECOMMUNICATIONS

Question: Would you please tell us how the agricultural telecommunications funds are being spent? Please give us a status report on AG*SAT.

Answer: The Cooperative State Research, Education and Extension Service conducts a competitive grants program to make available to accredited institutions of higher education the funding allocated to the Agricultural Telecommunications Program. In Fiscal Year 1995, twelve projects were funded in the areas of Program Delivery; Innovative Program Development and Production; and Capacity Building.

AG*SAT, now called Agriculture Distance Electronic Consortium -- ADEC--, has been a recipient of Agricultural Telecommunications Funding in past years; they did not successfully compete for funding in FY 1995.

Question: Please list the water quality projects funded in FY 1995 and in FY 1996 to date.

Answer: Attached is a breakdown of the Water Quality projects by Type with the FY 1995 Funded amounts and the Proposed FY 1996 Funding amounts.

State	Type	Project Name	Projects	
			FY 1995 Funded	Proposed for FY 1996 Funding
Alabama	HUA	Ryan/Crooked/Rock Creeks	60,000	60,000
Alabama	HUA	Sand Mountain/Lake Guntersville	65,000	65,000
Alabama	IPS-Direct	Alabama	55,000	55,000
Alaska	IPS-Direct	Alaska	55,000	55,000
Arizona	HUA	Casa Grande/Coolidge	65,000	65,000
Arizona	HUA	West Maricopa	60,000	60,000
Arizona	IPS-Direct	Arizona	53,500	55,000
Arkansas	Demo	Millwood Lake	95,000	95,000
Arkansas	HUA	Long Creek	60,000	60,000
Arkansas	HUA	Muddy Fork/Moore's Creek	65,000	65,000
Arkansas	IPS-Direct	Arkansas	53,500	55,000
California	Demo	Rice Herbicide	124,910	124,910
California	HUA	Morro Bay	40,000	2,000
California	HUA	West Stanislaus	60,000	38,100
California	HUA	Westside San Joaquin Valley	65,000	65,000
California	IPS-Direct	California	53,500	55,000
Colorado	Demo	San Luis Valley	95,000	95,000
Colorado	HUA	Patterson Hollow	50,000	50,000
Colorado	IPS-Direct	Colorado	53,500	55,000
Connecticut	Estuaries	Nemo	89,566	89,566
Connecticut	HUA	Housatonic River	65,000	65,000
Connecticut	HUA	Scantic River	60,000	60,000
Connecticut	IPS-Direct	Connecticut	53,500	55,000

State	Type	Project Name	Projects	
			FY 1995 Funded	Proposed for FY 1996 Funding
Delaware	HUA	Inland Bays	65,000	65,000
Delaware	IPS-Direct	Delaware	53,500	55,000
Florida	Demo	Lake Manatee	65,000	95,000
Florida	HUA	Jackson Karst Cropland	60,000	60,000
Florida	HUA	Lake Apopka	54,700	3,000
Florida	HUA	Middle Suwannee River	65,000	65,000
Florida	IPS-Direct	Florida	53,500	55,000
Georgia	Demo	Gum Creek	60,760	95,000
Georgia	HUA	Little River/Rooty Creek	59,520	55,200
Georgia	IPS-Direct	Georgia	53,500	55,000
Guam	IPS-Direct	Guam	53,500	55,000
Hawaii	HUA	Kaiaika-Waialua Bay	50,000	60,000
Hawaii	IPS-Direct	Hawaii	53,500	55,000
Idaho	Demo	Snake River Plain	95,000	95,000
Idaho	HUA	Snake-Payette	60,000	60,000
Idaho	IPS-Direct	Idaho	53,500	55,000
Illinois	HUA	Little Vermillion	60,000	60,000
Illinois	IPS-Direct	Illinois	53,500	55,000
Indiana	Databases	Water Quality Information Management	134,000	140,000
Indiana	HUA	Tri-County	60,000	58,000
Indiana	HUA	Upper Tippecanoe	65,000	45,000
Indiana	IPS-Direct	Indiana	53,500	55,000
Iowa	Demo	Northeast Iowa River	70,000	96,085

State	Type	Project Name	Projects		Projects	Funding
			FY 1995 Funded	Proposed for FY 1996		
Iowa	HUA	Sny Magill	40,000	60,000		60,000
Iowa	HUA	Three Mile Creek	45,000	60,000		60,000
Iowa	HUA	Union Grove & Black Hawk	18,500	10,385		10,385
Iowa	IPS-Direct	Iowa	53,500	55,000		55,000
Iowa	IPS-Support	Ag Business Pollution Prevention Demonstration	40,000	0		0
Iowa	IPS-Support	Assessment of Quality-Soil Testing Data	20,000	0		0
Iowa	MSEA	Iowa-MSEA	85,000	75,000		75,000
Kansas	IPS-Direct	Kansas	53,500	55,000		55,000
Kentucky	HUA	Taylorsville Lake	55,000	55,000		55,000
Kentucky	IPS-Direct	Kentucky	53,500	55,000		55,000
Louisiana	HUA	Bayou Queue De Tortue	65,000	65,000		65,000
Louisiana	IPS-Direct	Louisiana	53,500	55,000		55,000
Maine	Estuaries	Casco Bay	64,962	64,962		64,962
Maine	IPS-Direct	Maine	53,500	55,000		55,000
Maryland	Demo	Monocacy River	79,815	120,000		120,000
Maryland	HUA	German Branch	50,000	60,000		60,000
Maryland	IPS-Direct	Maryland	53,500	55,000		55,000
Massachusetts	Estuaries	Narragansett Bay-MA	65,000	65,000		65,000
Massachusetts	HUA	Buzzards Bay	65,000	0		0
Massachusetts	HUA	Wachusett Reservoir	60,000	60,000		60,000
Massachusetts	IPS-Direct	Massachusetts	53,500	55,000		55,000
Michigan	Demo	Saginaw Bay	95,000	95,000		95,000
Michigan	HUA	Sycamore Creek	65,000	65,000		65,000

State	Type	Project Name	Projects	
			FY 1995 Funded Projects	Proposed for FY 1996 Funding
Michigan	HUA	Wolf Creek	60,000	60,000
Michigan	IPS-Direct	Michigan	53,500	55,000
Minnesota	Demo	Anoka Sand Plain	165,000	165,000
Minnesota	HUA	St. Peter/Prairie Due Chien/Olmsted County	65,000	65,000
Minnesota	IPS-Direct	Minnesota	53,500	55,000
Minnesota	MSEA	Minnesota-MSEA	90,000	75,000
Mississippi	HUA	Tangipahoa River	48,750	65,000
Mississippi	IPS-Direct	Mississippi	53,500	55,000
Mississippi	IPS-Support	Southern Region Water Quality Meeting-What Works?	5,000	0
Missouri	HUA	Upper Niangua River	60,000	60,000
Missouri	IPS-Direct	Missouri	53,500	55,000
Missouri	MSEA	Missouri-MSEA	75,000	75,000
Montana	IPS-Direct	Montana	53,500	55,000
Multi-State	IPS-Support	Whole Farm Planning	0	180,000
Nebraska	Demo	Mid Nebraska	160,000	160,000
Nebraska	HUA	Central Blue Valley	50,000	50,000
Nebraska	HUA	Elm Creek	65,000	65,000
Nebraska	IPS-Direct	Nebraska	53,500	55,000
Nebraska	IPS-Support	Corn Growers	69,800	0
Nebraska	MSEA	Nebraska-MSEA	75,000	75,000
Nevada	IPS-Direct	Nevada	53,500	55,000
New York	Demo	Walkil-Rondout	100,000	100,000

State	Type	Project Name	Projects	
			FY 1995 Funded	Proposed for FY 1996 Funding
New Mexico	HUA	Dona Ana/Sierra	65,000	65,000
New York	HUA	East Sidney Lake	65,000	0
New Hampshire	HUA	Great Bay	65,000	65,000
New Jersey	HUA	Great Swamp	60,000	0
New Hampshire	HUA	Upper Connecticut	60,000	60,000
New Mexico	IPS-Direct	New Mexico	53,500	55,000
New Hampshire	IPS-Direct	New Hampshire	53,500	55,000
New Jersey	IPS-Direct	New Jersey	53,500	55,000
New York	IPS-Direct	New York	53,500	55,000
New York	IPS-Support	Distance Education	70,070	0
North Carolina	Demo	Herrings Marsh Run	155,000	155,000
North Carolina	Estuaries	Albemarle-Pamlico	70,000	70,000
North Dakota	HUA	Bowman/Haley	65,000	65,000
North Carolina	HUA	Goshen Swamp	65,000	65,000
North Dakota	IPS-Direct	North Dakota	53,500	55,000
North Carolina	IPS-Direct	North Carolina	53,500	55,000
Ohio	HUA	Darby Creek	60,000	60,000
Ohio	HUA	Indian Lake	60,000	60,000
Ohio	IPS-Direct	Ohio	53,500	55,000
Ohio	MSEA	Ohio-MSEA	75,000	75,000
Oklahoma	HUA	Battle Branch	65,000	65,000
Oklahoma	HUA	Peacheater Creek	50,000	50,000
Oklahoma	IPS-Direct	Oklahoma	53,500	55,000

State	Type	Project Name	Projects	
			FY 1995 Funded	Proposed for FY 1996 Funding
Oregon	HUA	Ontario	65,000	65,000
Oregon	HUA	Tualatin River	60,000	60,000
Oregon	IPS-Direct	Oregon	53,500	55,000
Pennsylvania	Eval/Acctblty	Pennsylvania Evaluation	69,208	69,208
Pennsylvania	HUA	Pequea/Mill Creeks	57,399	58,776
Pennsylvania	IPS-Direct	Pennsylvania	53,500	55,000
Puerto Rico	HUA	Lake Loiza	39,235	65,000
Puerto Rico	IPS-Direct	Puerto Rico	53,500	55,000
Rhode Island	Estuaries	Narragansett Bay-RJ	65,000	65,000
Rhode Island	Eval/Acctblty	Volunteer Evaluation	15,000	0
Rhode Island	HUA	Pawcatuck	65,000	65,000
Rhode Island	IPS-Direct	Rhode Island	53,500	55,000
South Dakota	Demo	Big Sioux Aquifer	90,000	90,000
South Carolina	HUA	Camping Creek/Bush River	65,000	65,000
South Carolina	HUA	Lake Bowen	60,000	60,000
South Dakota	HUA	Lower Rapid Creek	50,000	50,000
South Dakota	IPS-Direct	South Dakota	53,500	55,000
South Carolina	IPS-Direct	South Carolina	53,500	55,000
Tennessee	HUA	Beaver Creek	60,000	60,000
Tennessee	HUA	North Fork Creek/Fall Creek	65,000	20,000
Tennessee	IPS-Direct	Tennessee	53,500	55,000
Texas	Demo	Seco Creek	160,000	160,000
Texas	Eval/Acctblty	Analysis of National Water Quality Database	61,600	61,600

State	Type	Project Name	Projects	
			FY 1995 Funded	Proposed for FY 1996
Texas	HUA	Lake Fork Creek	60,000	60,000
Texas	HUA	Seymour Aquifer	60,000	60,000
Texas	HUA	Upper North Bosque	65,000	65,000
Texas	Interagency Liaison	EPA Regional Liaison		
Texas	IPS-Direct	Texas	7,870	7,870
Utah	HUA	Little Bear River	53,500	55,000
Utah	HUA	Otter Creek/Kooshareem	64,997	65,000
Utah	IPS-Direct	Utah	59,990	60,000
Vermont	HUA	Lower Missisquoi	53,500	55,000
Vermont	IPS-Direct	Vermont	65,000	65,000
Virgin Island	IPS-Direct	Virgin Island	53,500	55,000
Virginia	Estuaries	Chesapeake Bay	53,500	55,000
Virginia	HUA	Blackwater River	95,100	95,100
Virginia	IPS-Direct	Virginia	60,000	60,000
Washington	HUA	Granger Drain	53,500	55,000
Washington	Interagency Liaison	Cooperative EPA Liaison	60,000	60,000
Washington	IPS-Direct	Washington	14,155	14,155
West Virginia	Estuaries	Potomac Head Water	53,500	55,000
West Virginia	HUA	Greenbrier River	80,000	80,000
West Virginia	IPS-Direct	West Virginia	65,000	65,000
Wisconsin	Demo	East River Watershed	53,500	55,000
			136,264	20,000

State	Type	Project Name	Projects	
			FY 1995 Funded Projects	Proposed for FY 1996 Funding
Wisconsin	HUA	Stevens Point/Whiting/Plover Wellhead	65,000	65,000
Wisconsin	IPS-Direct	Wisconsin	53,500	55,000
Wisconsin	IPS-Support	Community Based Youth Water Quality Education	96,600	75,000
Wisconsin	IPS-Support	Public Education For Sustainable Water Quality	9,500	9,500
Wisconsin	REIM	Farm-A-Syst	180,000	150,000
Wyoming	HUA	Ocean Lake	65,000	65,000
Wyoming	IPS-Direct	Wyoming	53,500	55,000
GRAND TOTAL			10,387,771	10,148,407

Project Type Definitions:

Databases--Supports the needs of the partners and provides current and developing technology to improve the information outreach nationally

Demo--Demonstration Project--Different sets of agricultural, soil, and geological conditions--to address agricultural non-point sources of pollution.

Estuaries of National Significance--Estuaries---Through non-formal education programs, promote comprehensive planning and management in nationally significant estuaries threatened by agricultural pollution.

Evaluation/Accountability--Eval/Acctblty---Assess current practices in water quality to determine appropriateness of evaluation tool and evaluation programs.

HUA --Hydrological Unit Area---Different agricultural watersheds or aquifer-recharge areas--provide educational, technical, and financial assistance to help farmers and ranchers meet state water quality goals.

Interagency Liaison--Provide management and support to the state partners on a regional basis.

IPS--Improved Program Support

IPS-Direct --funding directly to the states---Formula funds to 50 states and Guam, Puerto Rico, and the Virgin Islands to improve surface and ground water quality focusing on five objectives --nutrient management, pesticide management, animal waste management, quality of water/wellhead protection, and public policy education.

IPS-Support --special project funding---Develop pilot projects to demonstrate new/innovative programs and program materials across the Cooperative Extension System using partners such as commodity organizations/EPA/NRCS.

MSEA--Management System Evaluation Areas --MSEA ---Assess the effects of surface and ground water contamination by pesticides and nitrogen and the impact on drinking water.

REIM --Farm*A*Syst---Assess the needs of farmers and ranchers and establish programs to support needed changes in farming practices to establish a basis for improving water quality. --offshoots: Home*A*Syst, and adapted for a Canadian version and different European versions.

AFLATOXIN RESEARCH, ILLINOIS

Past work on this problem has involved screening corn germplasm for resistance to aflatoxin production, testing of *Aspergillus flavus*-inhibiting chemicals, identifying fungus-inhibiting enzymes, developing recombinant genetics methods, and tissue culture/plant regeneration studies. The principal researcher believes aflatoxins are potent carcinogens with other toxic properties, and these characteristics pose potential health risks for humans and farm animals, depending on degree of exposure to toxin-contaminated corn. Aflatoxin contamination continues to be serious in the southeastern United States, but outbreaks are also occurring in the upper midwest.

The original goal of this research was the reduction of aflatoxin production in corn, and it remains as such at present. Recent accomplishments include progress on basic enzyme studies in maize kernels, plant breeding for high levels of resistance to *Aspergillus* ear rot and aflatoxin production, and the biochemistry of factors responsible for inhibition of fungal growth and inhibition of toxin production. Specifically, it was found last year that the chitinase and beta-glucanase activities in kernels, silks and husks varied little in different genotypes under field conditions. Thus, there was no observed clear correlation between these enzymes and resistance to aflatoxin formation. Fertile transformed maize plants have been produced by particle bombardment of cell callus cultures, but so far the resultant plants contained only the selectable marker but not the chitinase or beta-glucanase genes. The *Aspergillus* fungus grew less in the presence of callus of a resistant x susceptible cross than with the callus of a susceptible inbred line.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$87,000; fiscal year 1991, \$131,000; and fiscal years 1992-1993, \$134,000 per year; fiscal year 1994, \$126,000; fiscal year 1995, \$113,000; and fiscal year 1996, \$113,000. A total of \$838,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$103,483 state appropriations, and \$115,500 miscellaneous in 1991; \$5,470 miscellaneous in 1992; \$40,269 state appropriations, \$898 product sales, and \$38,777 miscellaneous in 1993; \$49,000 in 1994, and \$20,293 in fiscal year 1995.

This research is being conducted at the University of Illinois. The researchers anticipate that the work may be completed in fiscal year 1996.

AGRICULTURAL DIVERSIFICATION AND SPECIALTY CROPS, HAWAII

This ongoing project continues to work toward completing its primary objective; the development of an additional agricultural and food processing opportunity for Hawaii. The pilot scale taro flour processing plant was fully operational at the very end of December 1995 and now is beginning to produce quantities of flour that will help determine the full-scale feasibility of developing taro-based products for individuals with food sensitivities. There have been positive contacts with private investors and an allergy specialist in planning limited tests with volunteer patients who suffer food insensitivities.

Work in the area of wet-packaging of pineapple was stopped because of changes in business plans by the private sector partner. A new project was initiated in the area of high-pressure sterilization of a variety of fruits and vegetables. Semi-commercial scale supplies of peach palm are now available, and there is enough information about its use to develop appropriate education/marketing outreach tools.

The principal researcher believes Hawaii is in great need of commercially viable alternatives to sugar and pineapple, both of which have been greatly reduced in the last few years. Research and implementation of potential ideas with the private sector is needed to evaluate the commercial potential of university-based work. In case of taro-based food products for people with food sensitivities, entrepreneurs in Hawaii can perhaps develop commercially viable businesses and food-sensitive consumers can enjoy a range of new food products.

The goal of the original proposal was to screen potential food and nonfood crops for commercial development in Hawaii. White taro emerged as the most promising new crop, and taro-based products emerged as the most promising processed product line. The researchers have identified a variety that suits their needs; developed a potential market profile; developed contacts in the medical and health-food sales industry groups; worked with many private sector partners to establish a pilot-scale flour processing facility and have run test batches of flour. The peach palm work has been initiated and will continue until educational objectives are met. Wet-pack work is being transformed into efforts to investigate high-pressure processing of pineapple and many other products as an alternative to pesticides for domestic and international shipment.

Grants have been awarded from funds appropriated as follows: fiscal years 1988 and 1989, \$156,000 per year; fiscal years 1990 through 1993, \$154,000 per year; fiscal year 1994, \$145,000; and fiscal years 1995 and 1996, \$131,000 per year. A total of \$1,335,000 has been appropriated.

Non-federal funds are not provided for this research. The University of Hawaii provides in-kind support in the form of laboratory and office facilities, equipment and equipment maintenance and administrative support services: \$66,513 in fiscal year 1991; \$68,503 in fiscal year 1992; \$75,165 in fiscal year 1993; and \$74,663 in each fiscal year 1994 and 1995. In addition, nearly \$30,000 of in-kind support has come from private sector partners.

Research is being conducted at the University of Hawaii's Institute of Tropical Agriculture and Human Resources. It is anticipated that the private sector will have enough information by 1996 to decide on the viability of adopting the taro-base food product project. Continuing efforts will be technology transfer for taro and peach palm, advancing the high pressure processing technology, and developing the university's capability to develop new products and processes through various public and private partnerships.

AGRICULTURAL MANAGEMENT SYSTEMS, MASSACHUSETTS

The research and technology transfer program is providing alternative pest management systems for several key commodities that are sustainable, biologically based, and economically viable. The principal researcher believes the Agricultural Management Systems Program serves as a New England regional center for the development of alternative agricultural management systems which are sustainable, biologically based and economically viable. The systems being developed are for the commodities apples, cranberries, strawberries, sweet corn, tomatoes, and greenhouse plants.

The original and continued goals of this research and technology transfer program is to continue development of pest management technologies that use natural enemies of pests and/or use genetically-engineered microorganisms, and improve techniques for pest monitoring and to incorporate new technologies into farmer's programs. For example, in a 1995 survey of Massachusetts commercial apple growers, growers indicated that they would like the fruit Integrated Pest Management--IPM--team to focus upon developing improved biologically-based control methods for flyspeck--above all other diseases--and mites, apple maggot, leafhoppers, plum curculio and leafminers--above all other arthropods. Accomplishments documented in 1995 include bioassay tests of plum curculio response to solvent extracts of three apple cultivars to use odor as a long-range attractant to existing curculio visual traps; apple maggot flies have been shown to be attracted to spheres baited with butyl hexanoate--synthetic fruit odor. Data show that traps baited with butyl hexanoate is an effective odor attractant under commercial-orchard conditions. When the entire plot perimeter is surrounded by baited traps as a fly control measure, injury to fruit is only slightly above the level achieved by three insecticide sprays; the establishment of a mite predator, '*Typhlodromus pyri*', was determined, however, applications of fungicide and/or insecticide after May had negative effects on the predator; first year data on fly speck suggest that the removal of brambles--as overwintering sources of flyspeck inoculum--can have a strong positive effect on reduction of flyspeck incidence on harvested fruit. Similar examples of accomplishment that is of regional and national significance can be cited in other commodities under investigation.

This program began in fiscal year 1991. Grants have been awarded from funds appropriated as follows: fiscal year 1991, \$275,000; fiscal years 1992-1993, \$261,000 per year; fiscal year 1994, \$245,000; and fiscal years 1995-1996, \$221,000 each year. A total of \$1,484,000 has been appropriated for this work.

Fiscal year 1995 non-federal funds from the Massachusetts Department of Food and Agriculture total \$134,000. Similar support was received for other years.

This research is underway at the Massachusetts Agricultural Experiment Station in the University of Massachusetts, Amherst. The researchers anticipate that the work may be completed in fiscal year 1996.

ALFALFA RESEARCH, KANSAS

This project was designed to improve utilization of alfalfa protein for beef cattle through coordinated research studies of plant breeding, forage management, and animal breeding. The principal researcher believes the stated need and the primary focus of this research deals with improvement of alfalfa lines which are more effectively used by cattle. The anticipated results from these studies will have application nationally wherever alfalfa is grown and/or used.

The original goal of this research was the development of improved cultivars, and production/harvest/storage systems that will result in improved utilization of alfalfa protein by beef cattle. To date the work has focused on experimental evaluation techniques for assessing protein loss and changes in stored alfalfa, the evaluation of genetic control of protein degradability and the conduct of animal feeding studies to compare alfalfa supplement with grain and low quality forage ration.

The work supported by this grant began in fiscal year 1992 and appropriations for fiscal years 1992 and 1993 were \$125,000 per year; fiscal year 1994, \$118,000; and fiscal years 1995-1996, \$106,000 each year. A total of \$580,000 has been appropriated.

The nonfederal funds provided for this grant were as follows: \$152,679 state appropriations, \$12,128 product sales, and \$1,128 other nonfederal in fiscal year 1992; \$215,361 state appropriations, \$28,784 product sales, \$3,154 non-federal in fiscal year 1993; \$17,499 state appropriation in 1994; and nonfederal funds for fiscal year 1995, \$101,845.

Research is being conducted at Kansas State University. The university researchers anticipate that work may be completed in fiscal year 1997.

ALLIANCE FOR FOOD PROTECTION, NE, GA

This new proposal is for a collaborative alliance between the University of Georgia Center for Food Safety and Quality Enhancement and the University of Nebraska Department of Food Science and Technology. Specific objectives are to: (1) develop and evaluate approaches to control, reduce or eliminate *Helicobacter pylori*, *Arcobacter*, and *Bacillus cereus* in foods; (2) develop a method for isolating *Helicobacter pylori* from foods; (3) develop a device to rapidly detect foodborne pathogens using immunomagnetic separation technology; (4) develop immunoassays and use them to detect allergens in foods; and (5) determine the effect of thermal processes on the toxicity and mutagenicity of *Fusarium* toxins.

The principal researcher believes the proposed research addresses emerging issues in food safety which have national, regional and local significance. Specifically, research will address bacterial pathogens that can cause ulcers, cancer and diarrheal illness and allergens in foods that cause serious reactions, including death, in individuals who are particularly sensitive to these pathogens. These

emerging issues affect consumers, the food industry, and food producers at all levels.

The original goal of this research is to: (1) facilitate the development and modification of food processing and preservation technologies to enhance the microbiological and chemical safety of products as they reach the consumer and (2) develop new rapid and sensitive techniques for detecting pathogens and their toxins as well as toxic chemicals in foods. Since this is a new project, no accomplishments have been reported.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 is \$300,000. The non-federal funds and sources provided for this grant will be \$117,000 state funds and \$250,000 industry and miscellaneous in fiscal year 1996.

Research will be conducted at the University of Georgia Center for Food Safety and Quality Enhancement in Griffin, Georgia and at the University of Nebraska Department of Food Science and Technology in Lincoln, Nebraska. The researchers anticipate that work may be completed in fiscal year 2000.

ALTERNATIVE CROPPING SYSTEMS IN THE SOUTHEAST

The South Carolina, North Carolina and Georgia Agricultural Experiment Stations have collaborated in a joint research project to study the economic and biological feasibility of expanded production of horticultural crops in the southeastern United States. The principal researcher believes this research is needed to evaluate the potential of improving economic competitiveness of small farms in the tri-state area through the development of production systems that recycle nutrients. Also, these systems may potentially have favorable environmental impacts through reduced nitrogen pollution.

The original goal for this work was to develop economically competitive cropping systems which reduce reliance on chemical pesticides and inorganic fertilizers. Specifically, production systems which utilize summer and winter cover crops and their combinations to reduce soil erosion, weed proliferation, and crop nitrogen requirements are being considered. To date the impact of winter cover crops in cucumber and sweetpotato has been investigated in some detail and summer cover crop research is underway.

Work supported by this grant began in fiscal year 1985 and appropriations are as follows: fiscal year 1985, \$300,000; fiscal years 1986-1989, \$285,000 per year; fiscal year 1990, \$281,000; fiscal year 1991, \$277,000; fiscal years 1992-1993, \$278,000 per year; fiscal year 1994, \$261,000; and fiscal years 1995-1996, \$235,000 each year. The total to date is \$3,285,000.

The non-federal funds and sources provided for this grant are as follows: \$1,313,653 State appropriations, \$2,959 product sales, \$35,600 industry, and \$259,735 miscellaneous for a total of \$1,611,947 in 1991; \$1,270,835 State appropriations, \$10,129 product sales, \$90,505 industry, and \$267,590

miscellaneous for a total of \$1,639,059 in 1992; \$1,334,680 State appropriations, \$1,365 product sales, \$33,800 industry, and \$356,308 miscellaneous for a total of \$1,726,153 in 1993; \$1,911,389 State appropriations, \$192,834 industry, and \$200,000 miscellaneous for a total of \$2,304,223 in 1994; and \$1,761,290 State appropriations, \$221,970 industry, and \$91,885 miscellaneous for a total of \$2,075,145 in 1995.

Research is being conducted by a consortium composed of the University of Arkansas at Fayetteville, the University of Arkansas for Medical Sciences at Little Rock, Kansas State University, and Iowa State University. The current program of research outlined under the consortium's recently revised strategic research plan should be completed in 1999.

ALTERNATIVE CROPS, NORTH DAKOTA

In this investigation of alternative crops, there are two main thrusts: the development and commercialization of novel new crops, and the differentiation of traditional crops. Both avenues of research have the shared goals of increasing biodiversity at the farm and field, while producing new crops and products for current and future societal needs. Some of these include (a) the development of crambe, flax, sunflower, safflower, and various rapeseeds as a renewable supply of industrial oil, (b) the study of products from amaranth, potatoes, sugarbeets, carrots, soybeans, barley, and sunflower for novel new uses in the paints, coatings, as food ingredients, and critical human nutrition markets, and (c) the development of new bio-chemical and enzymatic processes to refine and create supercritical and other high-value fluids from oilseed crops which could serve as effective renewable replacements for industrial uses.

The original goal of this research is to introduce, evaluate and test new crops which will broaden the economic diversity of crops grown in North Dakota. The primary emphasis is to find new crops with non-food uses and create value added products. The principal researcher believes that nationally, developing new crops and new markets for agricultural products is critical for both environmental and economic reasons. Enhanced biodiversity that comes from the successful commercialization of new crops aids farmers in dealing with pests and reducing the dependency upon pesticides. New markets are needed to provide more economic stability for agricultural products, especially as Federal price supports are gradually withdrawn. Regionally, the temperate areas of the Midwest have the potential to grow a great number of different crops but are in need of publicly- sponsored research efforts to reveal the most practical, efficient, and economical crops and products to pursue.

Appropriations by fiscal year are as follows: 1990, \$494,000; 1991, \$497,000; 1992 and 1993, \$700,000 per year; 1994, \$658,000; 1995, \$592,000; and in 1996, 550,000. A total of \$4,191,000 has been appropriated.

In fiscal year 1991, \$10,170 was provided by state appropriations. In fiscal year 1992, \$29,158, was also provided by state appropriations and self-generated funds. In fiscal year 1993, \$30,084, was provided by state appropriations. In

fiscal year 1994, \$161,628 was provided by state funds, \$3,189 provided by industry and \$9,020 provided by other sources, totalling \$173,837. In fiscal year 1995, \$370,618 was provided by state appropriations, \$1,496 provided by self-generated funds, \$1,581 provided by industry and \$5,970 was provided in other non-federal funds, totalling \$379,665 for FY 95.

The work is conducted on the campus of North Dakota State University and at the Carrington Research and Extension Center, Carrington, North Dakota, and the Williston Research Center, which are both in North Dakota. Work is also done in eastern Montana. The principal researcher believes that the development of new crops and products should be an on-going effort in North Dakota and other states.

ALTERNATIVE CROPS FOR ARID LANDS, TEXAS

This grant is to develop the two most abundant plants in southwestern United States, i.e. mesquite and cactus, into commercial crops through a combination of applied research and market development. In Texas, New Mexico, Arizona and California these plants occupy 72 million acres. The principal researcher believes the semi-arid regions of the United States that border with Mexico in Texas, New Mexico, Arizona, and California have some of the highest unemployment rates, lowest economic returns per acre, and lowest incomes in the United States. The two most abundant plant species in this region are prickly pear cactus and mesquite. By working with Mexican researchers, the principal researcher believes this grant will help to stabilize the economic situation of rural poor in Mexico and the United States. There are few crops capable of being grown sustainably in these regions. Due to the nitrogen fixing capability and thus soil improving properties of mesquite and high water use efficiency of cactus, these plants contribute to sustainable agriculture and will diversify southwestern agriculture. This research group is the only center in the United States developing these plants as crops. The principal researcher has been active with a national New Crops initiative supported by the Center for Agricultural Science and Technology (CAST) to develop grants programs for new feed/food from new crops. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. As Texas A&M University-Kingsville is not a land-grant institution, Hatch funds or other formula funding is not available to support this research. There is no competitive grants program targeting research on new crops for food or feed.

The goal is to dramatically improve the economic returns, and year-to-year economic stability in the southwestern United States. Accomplishments have been sale of a new cactus vegetable variety in 100 stores of the largest retail grocery chain in Texas, marketing of new cactus pickles through King Ranch national outlet, contributions of \$10,000 from mesquite BBQ industry with \$20,000 from Texas Beef Council to co-market beef and mesquite, presentations to architects in all major cities in Texas on mesquite technical qualities, introduction of a mesquite veneer furniture line in a national furniture chain, Crate & Barrel, a major collection of 130 fruit, forage and vegetable varieties of cactus, and a sustainable

system for mesquite management that avoids use of bulldozers and aerial herbicides. An International mesquite workshop will be held March at the National Academy of Science in Washington, D.C.

Fiscal year 1994 was the first year of funding for this grant and \$94,000 was appropriated. In fiscal years 1995 and 1996, \$85,000 was appropriated each year. A total of \$264,000 has been appropriated. Similar work has been funded since August 1985. In fiscal year 1994, \$43,215 was provided by the Texas legislature.

The work is being conducted by Texas A&M University, Kingsville, Texas. Significant but small Texas cactus and mesquite industries now exist. The principal researcher believes transformation of these small industries into medium industries and transfer of the arid technologies to low rainfall areas of the midwestern and southeastern United States will carry on well into the next century.

ALTERNATIVE CROPS, NORTH DAKOTA

In this investigation of alternative crops, there are two main thrusts: the development and commercialization of novel new crops, and the differentiation of traditional crops. Both avenues of research have the shared goals of increasing biodiversity at the farm and field, while producing new crops and products for current and future societal needs. Some of these include (a) the development of crambe, flax, sunflower, safflower, and various rapeseeds as a renewable supply of industrial oil, (b) the study of products from amaranth, potatoes, sugarbeets, carrots, soybeans, barley, and sunflower for novel new uses in the paints, coatings, as food ingredients, and critical human nutrition markets, and (c) the development of new bio-chemical and enzymatic processes to refine and create supercritical and other high-value fluids from oilseed crops which could serve as effective renewable replacements for industrial uses. The principal researcher believes that nationally, developing new crops and new markets for agricultural products is critical for both environmental and economic reasons. Enhanced biodiversity that comes from the successful commercialization of new crops aids farmers in dealing with pests and reducing the dependency upon pesticides. New markets are needed to provide more economic stability for agricultural products, especially as Federal price supports are gradually withdrawn. Regionally, the temperate areas of the Midwest have the potential to grow a great number of different crops but are in need of publicly-sponsored research efforts to reveal the most practical, efficient, and economical crops and products to pursue.

The original goal of this research is to introduce, evaluate and test new crops which will broaden the economic diversity of crops grown in North Dakota. The primary emphasis is to find new crops with non-food uses and create value added products.

Appropriations by fiscal year are as follows: 1990, \$494,000; 1991, \$497,000; 1992 and 1993, \$700,000 per year; 1994, \$658,000; 1995, \$592,000; and in 1996, 550,000. A total of \$4,191,000 has been appropriated.

In fiscal year 1991, \$10,170 was provided by state appropriations. In fiscal year 1992, \$29,158, was also provided by state appropriations and self-generated funds. In fiscal year 1993, \$30,084, was provided by state appropriations. In fiscal year 1994, \$161,628 was provided by state funds, \$3,189 provided by industry and \$9,020 provided by other sources, totalling \$173,837. In fiscal year 1995, \$370,618 was provided by state appropriations, \$1,496 provided by self-generated funds, \$1,581 provided by industry and \$5,970 was provided in other non-federal funds, totalling \$379,665 for FY 95.

The work is conducted on the campus of North Dakota State University and at the Carrington Research and Extension Center, Carrington, North Dakota, and the Williston Research Center, which are both in North Dakota. Work is also done in eastern Montana. The principal researcher believes that the development of new crops and products should be an on-going effort in North Dakota and other states.

ALTERNATIVE MARINE AND FRESHWATER SPECIES, MISSISSIPPI

The research has focused on the culture of hybrid striped bass, prawns, and crawfish. Nutritional requirements and alternative management strategies for these species have been evaluated and field tested. Utilization of improved technologies will enhance production efficiency and accelerate the use of these alternative species in commercial aquaculture. The principal researcher indicates that as the aquaculture industry continues to grow it is extremely important to consider alternative species for culture in order to help the industry diversify. Diversification is of benefit to both the producer and consumer of aquaculture products. Research generated from this grant should lead to alternative production systems that can have national, regional and local impact.

The original goal of this research was to develop and evaluate aquaculture production technologies that would lead to the use of alternative species and management strategies in commercial aquaculture production. Research evaluating stocking rates, nutritional requirements, and methods to reduce stress in hybrid striped bass production systems has led to the development of improved production efficiency in these systems. Recent research indicates that hybrid striped bass have species specific digestibility and nutrient requirements and that formulated feeds that are based on these specific requirements are more cost effective. Field testing of alternative management strategies for freshwater prawns has demonstrated improved production efficiency in commercial size operations.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal years 1991-1993 has been \$275,000 per year, \$258,000 in 1994, and \$308,000 in fiscal years 1995-1996 each year. A total of \$1,699,000 has been appropriated.

The university reports a total of \$332,091 of non-federal funding to support research carried under this program for fiscal years 1991-1994 and \$70,636 in fiscal year 1995. The primary source of the non-federal funding was from state sources.

Research is being conducted at Mississippi State University. The researchers anticipate that the specific research outlined in the current proposal will be completed in fiscal year 1997.

ANIMAL SCIENCE FOOD SAFETY CONSORTIUM

The research goal of the consortium has been to enhance the safety of red meat and poultry products for human consumption. Research has focused on accomplishing six objectives: (1) develop rapid detection techniques for pathogenic bacteria and toxic chemicals for use by the red meat and poultry production-marketing system; (2) devise a statistical framework from which to develop tolerance levels for these hazardous substances; (3) identify effective interdiction points and develop methods to prevent or reduce substance presence; (4) develop monitoring techniques and methodologies to detect and estimate the human health risk of these contaminants; (5) develop technologies to reduce hazards and enhance quality of animal food products to complement the development of Hazard Analysis Critical Control Point programs by USDA; and (6) estimate benefits and costs and risks associated with interdiction alternatives. The consortium's researchers have focused their efforts primarily on the first, third, fifth, and sixth objectives. The principal researcher believes a safer national meat product food supply could reduce large economic losses --\$4 to \$7 billion a year-- as a result of lost productivity and wages and medical treatment of victims. Safer products will also find greater acceptance in global markets and, therefore, contribute to increased meat product exports and rural economic growth.

The consortium is organized and operated along institutional lines with a coordinator and directors managing the research program. Advisory and technical committees consist of outside representation and provide advice on research planning and expertise on technical matters. Major accomplishments this past year by the University of Arkansas include development of a rapid procedure to determine the pathogenicity of *Listeria monocytogenes* and *E. coli* 0157:H7 that will be useful for risk estimation purposes; demonstration that quaternary ammonium compounds, specifically cetyl-pyridinium chloride, reduce the binding of bacteria to poultry skin and kill bacteria in process water; development of an electro-stimulation and pasteurization procedure that significantly reduces the level of pathogens in poultry chill water; demonstration of the effectiveness of low levels of ozone to control pathogens and spoilage organisms in poultry chill water; and is testing a process for mechanically stripping meat from poultry carcasses which may reduce microbiological contamination.

Major accomplishments this past year by Iowa State University include development and application of DNA probes to detect *E. coli* 0157:H7 and *Arcobacter* on pork; development of a rapid, 30 minute test for detection of *Salmonella* bacteria which can be used during processing without carcass invasion or slowing line speed; development of an ELISA serum assay test to test live hogs for *Salmonella*; and study findings that packaging under hydrostatic pressure can extend shelf life of pork, that customers were willing to pay 10 percent to 30 percent more for irradiated pork and chicken than non-irradiated meat, and that

irradiation can effectively reduce populations of *Listeria monocytogenes*, *Yersinia enterocolitica*, *Arcobacter*, *Salmonella*, and other *Enterobacteriaceae* in pork.

Kansas State University has demonstrated under commercial conditions that electronic identification systems for beef cattle are feasible from an implant retention, operational, and retrievability standpoint; developed analytical procedures to detect mycotoxin fumonisin and organophosphate pesticide contaminants in animal tissue; demonstrated that carcass treatment practices such as washing and trimming need to be supplemented with treatments of cuts after final handling to be effective in the removal of pathogens; developed enrichment techniques for the simultaneous recovery of different pathogens in a single test; determined that low dose irradiation is a viable intervention technology with minimal effects on beef quality; developed standardized methods for beef carcass sampling and microbial analysis; and determined that monitoring endpoint cooking temperature of ground beef patties or following a prescribed time/temperature interaction known to achieve a given endpoint are the safest ways to prevent consumption of undercooked ground beef.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$1,400,000; fiscal year 1990, \$1,678,000; fiscal year 1991, \$1,845,000; fiscal years 1992-1993, \$1,942,000 per year; fiscal year 1994, \$1,825,000; and fiscal years 1995-1996, \$1,743,000 each year. A total of \$14,118,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$1,313,653 State appropriations, \$2,959 product sales, \$35,600 industry, and \$259,735 miscellaneous for a total of \$1,611,947 in 1991; \$1,270,835 State appropriations, \$10,129 product sales, \$90,505 industry, and \$267,590 miscellaneous for a total of \$1,639,059 in 1992; \$1,334,680 State appropriations, \$1,365 product sales, \$33,800 industry, and \$356,308 miscellaneous for a total of \$1,726,153 in 1993; \$1,911,389 State appropriations, \$192,834 industry, and \$200,000 miscellaneous for a total of \$2,304,223 in 1994; \$1,761,290 State appropriations, \$221,970 industry, and \$91,885 miscellaneous for a total of \$2,075,145 in 1995; and \$2,643,666 State appropriations and \$152,431 industry, for a total of \$2,796,097 in 1996. Thus, from 1991 through 1996 a total of \$12,152,624 in non-federal funds was provided.

Research is being conducted at the University of Arkansas at Fayetteville, the University of Arkansas for Medical Sciences at Little Rock, Arkansas Children's Hospital, Iowa State University, and Kansas State University. The current program of research outlined under the consortium's revised strategic research plan should be completed in 1999.

AQUACULTURE, CONNECTICUT

The researchers have indicated that the overall research goal is to improve the health management of important commercial production systems for oysters. The proposal calls for studies on protozoan diseases of oysters on the East Coast. Biotic and abiotic factors that impact shellfish and finfish in coastal waters would

also be monitored. Protocols and health management strategies would be developed to assist the oyster industry in maintaining sustainable production systems.

The researchers have indicated that the research will focus on health management in oyster production systems. The proposed research will address oyster diseases of regional and national significance.

The work supported by his grant began in fiscal year 1995 and the appropriation for fiscal years 1995-1996 is \$181,000, each year. The research supported by this grant began in fiscal year 1995. The university estimates that non-federal funding to support research carried out under this program is \$50,000 each year in fiscal years 1995-1996.

Research will be conducted at the University of Connecticut in cooperation with the State of Connecticut. The researchers anticipate that work may be completed in fiscal year 1997.

AQUACULTURE, ILLINOIS

Researchers are developing and evaluating closed system technology for application to commercial aquaculture. System design and cost of production analysis for these systems have been conducted in commercial trials and pilot studies. The principal researcher believes the development of alternative aquaculture production systems, such as closed recirculating systems, could reduce demands for water and would provide for greater control over production in aquacultural systems. Closed systems could be established independent of climatic condition in any region of the country. These systems also offer greater opportunity to manage aquacultural waste and reduce environmental impact.

The goal of this program is to develop closed recirculating aquacultural systems in order to lower production cost, improve product quality, and reduce the potential environmental impact of aquacultural production systems. Initial system design analysis has led to the development of three systems that are currently being evaluated. Production cost analysis in commercial systems have been conducted in cooperation with the private sector. Research on effluent characterization and waste management are continuing.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992-1993 was \$200,000 per year; fiscal year 1994, \$188,000; and fiscal years 1995-1996, \$169,000 each year. A total of \$926,000 has been appropriated.

The university estimates that non-federal funding for this program is as follows: in fiscal year 1992, \$370,000; in fiscal year 1993, \$126,389; in fiscal year 1994, \$191,789; and in fiscal year 1995, \$152,682. The primary source of funding is from the state with gifts and grants accounting for the remainder. This estimate does not include substantial in-kind contributions from industry as this program conducts cooperative research with commercial producers.

Research is being conducted at Illinois State University at Normal, Illinois, through a subcontract with the University of Illinois. The university researchers anticipate that work may be completed in fiscal year 1998.

AQUACULTURE, LOUISIANA

Research has focused on catfish, crawfish, redfish, and hybrid striped bass in commercial aquaculture. Research has included basic and applied research in the areas of production systems, genetics, aquatic animal health, nutrition, and product quality. The principal researcher believes that research funded through this program focuses on the production of aquaculture species such as catfish, crawfish, hybrid striped bass, and redfish. The principal researcher indicates that there is a need to improve production efficiency in order to enhance the profitability and sustainability of the aquaculture industry. The research also addresses the issue of food safety and quality of farm-raised products.

The original goal of this research was to expand the technology base to enhance the development of aquaculture through a broad research program that addresses the needs of the industry. The university has completed studies in the area of fish nutrition, fish health, production management strategies, alternative species, seafood processing and broodstock development. Research has led to improved feed formulations, improved production strategies for crawfish, and improved processing technologies for aquaculture products.

Research to be conducted under this program will continue research initiated under the Aquaculture General program in fiscal years 1988 through 1991. The work supported by this new grant category began in fiscal year 1992 and the appropriation for fiscal years 1992-1993 was \$390,000 per year, \$367,000 in fiscal year 1994, and \$330,000 in fiscal years 1995-1996 each year, for a total of \$1,807,000.

The university estimates that non-federal funding for this program is as follows: in fiscal year 1991, \$310,051; in fiscal year 1992, \$266,857; in fiscal year 1993, \$249,320; in fiscal year 1994, \$188,816; and in fiscal year 1995, \$159,810. The primary source of this funding is from state sources with minor contributions from industry and other non-federal sources.

Research is being conducted at Louisiana State University. The university researchers anticipate that work may be completed in fiscal year 1999.

AQUACULTURE RESEARCH, STONEVILLE, MISSISSIPPI

The primary objectives of this research are to improve practical feeds and feeding strategies, and improve water quality in channel catfish ponds. Additionally, scientists are evaluating the application of acoustical instrumentation in commercial aquaculture. The principal researcher believes the farmed-raised catfish industry accounts for over 55 percent of the total U.S. aquaculture industry. Research funded in this program is directed towards two of the most important research needs of the industry, off-flavor and improved feeds. Research

findings have a direct impact on the profitability and sustainability of a significant segment of the domestic aquaculture industry.

The original goal of this research was to address the research needs of the catfish industry in the areas of water quality and nutrition. The research has led to an improved understanding of the sources and causes of off-flavor in commercial catfish ponds. Researchers are investigating the use of deep U-tubes aeration systems in catfish ponds to improve water quality. Research in the area of feeding strategies has led to improved diet formulation and feeding strategies. Scientists are currently evaluating three protein levels in catfish feeds under conditions that closely reflect commercial catfish ponds. Studies using acoustical instrumentation have demonstrated possible applications in commercial aquaculture. Researchers are designing and developing new instrumentation to determine fish size and number in aquaculture ponds.

Grants have been awarded from funds appropriated as follows: fiscal years 1980-81, \$150,000 per year; fiscal year 1982, \$240,000; fiscal years 1983-1984, \$270,000 per year; fiscal year 1985, \$420,000; fiscal years 1986-1987, \$400,000 per year; fiscal year 1988, \$500,000; fiscal year 1989, \$588,000; fiscal year 1990, \$581,000; fiscal year 1991, \$600,000; and fiscal years 1992-1993, \$700,000 per year; fiscal year 1994, \$658,000; and fiscal years 1995-1996, \$592,000 each year. A total of \$7,811,000 has been appropriated.

The university estimates a total of \$2,101,508 in non-federal funding to support this research for fiscal years 1991-1994 and \$1,128,451 in fiscal year 1995. The primary source of non-federal funding is from the state. Additional funding is provided from product sales, industry contributions, and other miscellaneous sources.

The grants have been awarded to the Mississippi Agricultural Experiment Station. All research is conducted at the Delta Branch Experiment Station, Stoneville, Mississippi. The acoustical research in aquaculture will be conducted in cooperation with the National Center for Physical Acoustics at the University of Mississippi. The researchers anticipate that the research will be completed in fiscal year 1999.

ASIAN PRODUCTS LABORATORY, OREGON

This grant is to expand Asian markets for U.S. produced white wheat by equipping a laboratory to conduct research on the necessary attributes of white wheat flour to produce noodles and related products important in Pacific Rim countries. Through collaborative arrangements with millers in selected major Asian markets, milling protocols will be developed and translated into foreign languages to facilitate the use of U.S. produced wheat by Asian millers. The principal researcher believes Australia and Canada have aggressive research, production and processing strategies to improve their competitive positions in the Asian wheat noodle market. This project improves the ability of Pacific Northwest and other U.S. white wheat producers and exporters to compete in Pacific Rim markets against Australian and Canadian competitors.

This four phased project is designed to develop white wheat flours of the type necessary to produce noodles in Asian markets to help maintain the competitiveness of U.S. wheat in these markets. Stage I is the collection of technical data on flour quality for noodle production. Stage II is the equipping of a noodle pilot plant laboratory. Stage III is to utilize that laboratory to appraise quality attributes of U.S. white wheat for use in Asian noodles and products. Stage IV will adapt milling processes for noodle flour production. The first two stages are completed and stage III will be completed in 1997. Milling protocols have been drafted for Taiwan, Korea, Hong Kong/China, and Southeast Asia, and wheat crop quality surveys have been conducted. Foreign flour milling study teams have experimented with U.S. produced white wheats and have reported results to U.S. wheat breeders and cereal scientists.

The work supported by this grant commenced in fiscal year 1994 with an appropriation of \$235,000. Appropriations in fiscal years 1995 and 1996 were \$212,000 in each year. A total of \$659,000 has been appropriated. State appropriations in fiscal year 1994 were \$88,517. In fiscal year 1995 state appropriations were \$148,000, and in fiscal year 1996 state appropriations were \$220,000.

This work is being carried out at the Wheat Marketing Center in Portland, Oregon. A small portion of phase III work was subcontracted to Kansas State University. The researchers plan to complete phase III by September, 1997. The phase IV time requirement is approximately three years after completion of phase III.

BABCOCK INSTITUTE FOR INTERNATIONAL DAIRY RESEARCH AND DEVELOPMENT

The Babcock Institute for International Dairy Research and Development was established with participation of the University of Wisconsin-Madison College of Agriculture and Life Sciences, School of Veterinary Medicine and the Cooperative Extension Division. The objective of the Babcock Institute is to link the U.S. dairy industry with the rest of the world through degree training, continuing education, technology transfer, adaptive research, scientific collaboration and market analysis. The principal researcher believes the need is to strengthen dairy industries around the world, to enhance international commercial and scientific collaborative opportunities for the U.S. dairy industry, and to draw upon global perspectives to build insight into the strategic planning of the U.S. dairy industry.

The goal of the Institute remains the linkage of the U.S. dairy industry with the rest of the world through training, continuing education and outreach, technology transfer, adaptive research, scientific collaboration and market analysis. Initial efforts were focused on planning and staffing. An initial activity was the development of multi-language extension materials about basic management techniques essential to optimize performance of U.S. germplasm overseas. This activity has grown to include manuals on Breeding and Genetics, Lactation and Milking, and Basic Dairy Farm Financial Management published in

English, Spanish, French, Russian, and Chinese. Research on potential implications of NAFTA on the U.S. dairy industry was completed. A technical workshop on dairy grazing in New Zealand and the midwest was organized and held in Madison during the fall of 1993. A technical workshop on Nutrient Management, Manure and the Dairy Industry: European Perspectives and Wisconsin's Challenges was held in Madison, Wisconsin during September, 1994. A round table was held in January, 1995 addressing "World Dairy Markets in the Post-GATT Era." Scientist's are being supported in collaborative research with New Zealand primarily to gain a better understanding of grazing systems as related to dairy management.

Grants have been awarded from funds appropriated as follows: fiscal years 1992 and 1993, \$75,000 per year; fiscal year 1994, \$250,000; and fiscal years 1995-1996, \$312,000 per year. A total of \$1,024,000 has been appropriated.

During fiscal year 1992, \$13,145 of State funds were used to support this program and \$19,745 of State funds in fiscal year 1993 for a total of \$32,890 during the first two years of this research. Information is not available for fiscal years 1994-1995.

Research is being conducted at the University of Wisconsin-Madison College of Agriculture and Life Sciences. The University researchers anticipate that work currently underway will be completed in September, 1996.

BARLEY FEED FOR RANGELAND CATTLE, MONTANA

This project will support research on the nutritional value of barley cultivars as feed for beef cattle. This effort will assist with the breeding and selection of superior types that can be more competitive with other feed grains and improve farmer income from barley crops grown in rotational systems in the Northern Great Plains. The principal researcher believes barley as a feed grain is grown extensively in the United States. Based on chemical analyses and the experience of some cattle feeders it should have a feed value on par with corn and wheat. However, it is listed as inferior to both in feeds hand books and is therefore discounted in the market. Comprehensive feeding studies of various barley types will be conducted to document the value as a feed grain for beef cattle.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 is \$250,000. Since this is a new Special Grant, there is no information on other sources of funds.

Research will be conducted at Montana State University. The researchers anticipate that work may be completed in fiscal year 2001.

BIODIESEL RESEARCH, MISSOURI

Research on biodiesel involves examining the feasibility of producing biodiesel and other higher value products from oilseed crops including soybeans,

canola, sunflower and industrial rapeseed. It also involves identifying and evaluating potential markets for the fuel and other products. An important part of the market thrust is to identify how biodiesel and other environmentally-friendly products can help meet state and Federal environmental mandates of reduced air and water pollution. The project is also evaluating local processing plants whereby farmers could produce crops, process the crops locally and use the fuel and high protein feed coproducts on their farms or locally. The principal researcher believes that although the initial work is being done in Missouri, the results from these studies are transferable nationwide and worldwide. These results may provide the agricultural community with alternative crops and more diverse markets, additional marketable products and a locally grown source of fuel. This will result in increased investment in local communities, additional jobs, and increased value added in the farm and rural community sectors.

The goals were to examine the feasibility of producing biodiesel and other higher value products from oilseed crops, plus to increase the value of coproducts. Results indicate that biodiesel can be produced most economically from soybeans, primarily because of the high value of soybean meal. Research indicates that with a community based biodiesel processing plant, costs of production could be as low as \$0.59 per gallon, although farmers might increase revenues by selling the soybean oil rather than using it to produce biodiesel. Since small quantities of biodiesel regularly sell for \$4.00 to \$9.00 per gallon, the structure of the production, marketing and transportation is currently under evaluation to identify more efficient and less costly ways to produce and market biodiesel. Also, a study of which markets might provide the best opportunity to use increased levels of biodiesel is underway. Such markets might include underground mining and the marine industry in addition to urban mass transit systems and cities having problems meeting more stringent air quality mandates. Research has also identified that rapeseed meal compares favorably to soybean meal and blood meal as an animal feed. It has a higher escape protein value than soybean meal. This research is carried out in close cooperation and coordination with other state and Federal agencies, plus trade associations such as the National Biodiesel Board, the United Soybean Board, American Soybean Association, and others.

The work began by this program began in fiscal 1993, and the appropriation for that year was \$50,000. The appropriation for 1994 was \$141,000; and for fiscal years 1995 and 1996 was \$152,000 annually. A total of \$495,000 has been appropriated.

The source of non-federal funds is state appropriated funds. The level in 1994 was \$7,310. The funding level in 1995 was \$74,854. Additionally, some work funded by this grant has been conducted in cooperation with the National Biodiesel Board, plus the Missouri Soybean Merchandising Council. The level of those matching funds for these two sources are not available.

The work is being carried out at the University of Missouri-Columbia. The principals estimate that the work with biodiesel will require an additional two years to complete. Additionally, the work on higher value products, such as solvents from biodiesel, is expected to be on-going.

BIOTECHNOLOGY, OREGON

It is anticipated that these funds will be used for research projects at Oregon State University, the University of Oregon, and the Oregon Graduate Institute for Science and Technology. Which will include major studies involving genetic mechanisms regulating photosynthesis and plant development and involving expression systems for peroxidase enzymes that degrade lignin. The principal researcher believes the research funding is requested to enhance the biotechnology research infrastructure in basic and applied biotechnology within the cooperating institutions, including Oregon State University, the University of Oregon and the Oregon Graduate Institute of Science and Technology.

The cooperating institutions have indicated that work will involve both basic and applied studies related to agricultural biotechnology. The goal of the program is to improve the biotechnology research infrastructure, to foster research discoveries, and to develop technologies that lead to agricultural applications. Preference will be given to research that has potential for commercial development in the near future and that has potential for additional funding from other sources.

The work supported by this grant begins in fiscal year 1996, and the appropriation for fiscal year 1996 is \$217,000. The non-federal funds and sources that will be provided for this research in fiscal year 1996 have not yet been determined, since the project proposal is still under development. However, even though no Federal funds were obtained through this grant in fiscal year 1995, the State of Oregon appropriated \$1,226,706 for biotechnology research at Oregon State University.

The research plan is under development and involves coordinated biotechnology studies at Oregon State University, The University of Oregon, and the Oregon Graduate Institute for Science and Technology. The researchers anticipate that the work presently being proposed may be completed in fiscal year 1999.

BROOM SNAKEWEED

Current research addresses several areas for broom snakeweed control, including efforts to understanding more fully the onset of invasion and persistence of broom snakeweed, evaluate the toxicology and physiological effects of broom snakeweed on livestock, and develop an integrated weed management approach for broom snakeweed. The principal researcher believes the project is of regional interest to a multi-state area of the grazing lands of the West. Broom snakeweed is a serious weed in the Southwestern United States and adjacent Western States. About 22 percent of rangeland in Texas, and 60 percent in New Mexico are infested to some degree by the weed. Current cost for control of broom snakeweed in the southwestern United States is estimated at over \$41 million. Dense broom snakeweed stands cause significant economic losses in the plains, prairie and desert areas of the central and southwestern United States. Snakeweed is a poisonous plant causing death and abortion in livestock and is a weed which reduces the productivity of associated vegetation.

Ground surveys have been conducted statewide from 1989 to map snakeweed distribution and relative density patterns throughout every county in New Mexico. This project is in its fourth research year. A Geographic Information System --GIS-- approach is used to relate snakeweed populations to plant communities and soil type in areas where snakeweed is particularly dense. Research is addressing three general areas which are, first, ecology and management; second, biological control studies; and third, toxicology and animal health research. A considerable amount of useful research and practical application has resulted from this special grant. As an example, in biological control, several plant pathogens and insects are proving to be effective in snakeweed's control. Another area of emphasis, has been grazing management techniques and feeding studies to minimize toxicological effects on livestock. Feeding trials have demonstrated that snakeweed ingestion at 10 percent of diet did not impair fertility or semen characteristics in the test animal which was male rats.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$100,000; fiscal year 1990, \$148,000; fiscal year 1991, \$150,000; fiscal years 1992 and 1993, \$200,000 per year; fiscal year 1994, \$188,000; and fiscal years 1995 and 1996, \$169,000 each year. A total of \$1,324,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$249,251 state appropriations in 1991; \$200,110 state appropriations in 1992; \$334,779 state appropriations in 1993; \$302,793 state appropriations in 1994; and \$294,451 state appropriation in 1995.

Research is being conducted at New Mexico State University. Significant research can be accomplished in about two years. Most of the research is conducted in the field and progress is limited by the length of the growing season.

CANOLA RESEARCH SPECIAL GRANT, KANSAS STATE UNIVERSITY

Rapeseed lines from around the world are being evaluated for increased winter hardiness. Elite lines are being used to develop canola germplasm lines that will survive the winter in the central Great Plains. This will be accomplished using a plant breeding program. The principal researcher believes the domestic demand for canola oil has been increasing rapidly. With little domestic production, most of the demand has been met by imports. With limited production, private seed companies are not devoting time or money to develop the cultivars needed for canola production in Kansas and central Great Plains.

The original goal was to collect germplasm with increased winter hardiness and use it to develop cultivars with sufficient winter survivability to be grown in the central Great Plains. Over 500 rapeseed and canola quality lines and cultivars have been acquired and tested. The hardiest have been used as parents to produce lines. In the past four years, nearly 650 crosses have been made. Field and laboratory testing began during the fall of 1993. In 1993-94, advanced selections from these populations had a 30 percent increase in winter survival over the best released cultivars in western Kansas. In 1994-95 this germplasm was tested at 12

locations in seven states throughout the Great Plains and Midwest. Over all locations, several experimental lines that have shown increased winter hardiness in past years had yields equal to the best cultivars used as checks. The winter of 1995-96 has been severe in the Great Plains as well as most of the country. Severe winter kill is expected in the breeding nurseries with only the hardiest plants surviving. Over the next several years, surviving plants will be advanced, and those lines possessing superior traits will become the basis of our second generation of released cultivars. In 1995, KS3579 was released to other breeders as a germplasm. This line has shown significant improvement in winter hardiness and will be beneficial in increasing winter hardiness in canola cultivars around the world.

Work began on this project in 1992. Funding for fiscal year 1992 and fiscal year 1993, was \$100,000 per year; fiscal year 1994 was \$94,000; and fiscal years 1995 and 1996 were \$85,000 each year. A total of \$464,000 has been appropriated.

Kansas State University has provided \$44,960 in fiscal year 1992, \$21,321 in fiscal year 1993, \$22,336 in fiscal year 1994, \$23,399 in fiscal year 1995, and \$24,513 in fiscal year 1996. An additional \$50,000 was provided through a grant from industry for fiscal years 1993-1995.

The work is being conducted at Kansas State University, Agricultural Experiment Station, Department of Agronomy. The primary research site is at Manhattan with additional field locations at Hutchinson, Hays, and Colby, Kansas. Germplasm developed by Kansas State University is also being cooperatively tested by researchers in Belleville, Garden City and Parsons, Kansas, as well as cooperators in Texas, Missouri, Colorado, Nebraska, Illinois, Arkansas, Oklahoma, and Wyoming. Advanced selections adapted for the growing conditions of the great Plains and representing a significant improvement in both winter hardiness and yield potential for our unique environment are being developed. Foundation seed of the best of these lines will be increased over the 1996-1997 growing season and released to certified seed growers in 1997. The average time between the initial cross and a released variety is 8 to 10 years. The first crosses made at Kansas State University were in 1993.

CENTER FOR ANIMAL HEALTH AND PRODUCTIVITY, PENNSYLVANIA

This research is designed to reduce nutrient transfer to the environment surrounding dairy farms in the Chesapeake Bay watershed. Progress to date includes the development of an individual dairy cow model which will predict absorbed amino acids and the loss of nitrogen in manure. This model has been developed into user-friendly software so that trained farm advisors can evaluate herd nutrient management status while on site. Background literature has been reviewed and efforts have been initiated for the development of a whole farm model to integrate cow feeding and crop production data. The principal researcher believes that reducing non-point pollution of ground and surface water by nitrogen from intensive livestock production units is of concern nationally, and especially in sensitive ecosystems like the Chesapeake Bay. This research is designed to find

alternative feeding and cropping systems which will reduce net nutrient flux on Pennsylvania dairy farms to near zero.

The original goal of this research remains the development of whole farm management systems which will reduce nutrient losses to the external environment to near zero. To date the researchers have developed their own models to more accurately formulate rations for individual dairy cows which permit the comparison of alternative feeding programs based upon both maximal animal performance and minimal nutrient losses in animal waste. This model is being tested on select commercial dairy farms to evaluate the extent to which total nitrogen losses in manure can be reduced without impacting economic performance of the farm. At the same time, whole farm nutrient models are being developed to evaluate alternative cropping systems which will make maximum use of nutrients from animal waste and minimize nutrient flux from the total farm system.

A grant has been awarded from funds appropriated in fiscal year 1993 for \$134,000 and in fiscal year 1994 for \$126,000. In fiscal years 1995-1996, \$113,000 has been appropriated each year. A total of \$486,000 has been appropriated. Information on non-Federal funding is not yet available.

Research is being conducted at the University of Pennsylvania, College of Veterinary Medicine. The University researchers anticipate that work currently underway will be completed July 31, 1996.

CENTER FOR INNOVATIVE FOOD TECHNOLOGY, OHIO

The Center has funded innovative research projects in several areas. An on-line system for measuring the viscosity of tomato sauces was developed by an Ohio processor and scientists from the Ohio State University. In another project, a mechanical bone removal system is being developed for a small turkey processor. Another study has demonstrated the feasibility of ozone as a sterilizing agent for powdered food ingredients. In a fourth project, a model for waste minimization in fluid milk dairies is being developed. The use of neural network technology for quality control and adaptive process control is also being explored.

The principal researcher believes the value-added food processing industry is the largest industry in the Midwestern states, including Ohio. In Ohio alone, the industry contributes over \$17 billion to the annual economy. From an economic development point of view, processing and adding value to crops grown within a region is the largest possible stimulus to that region's total economic product. This program aims to partner with and encourage small and medium sized companies to undertake innovative research that might otherwise not be undertaken due to risk aversion and limited financial resources for research and development in these companies.

The original goal of the research was to develop innovative processing techniques to increase food safety and quality or reduce processing costs. The viscosity measuring system for tomato sauces will enable processors to make real time adjustments to their product, resulting in higher quality and consistency. The

dairy model being developed will provide a guideline for reducing product costs through lowered water and treatment costs. Completion of the deponing system will reduce labor costs significantly in the poultry industry. The neural network research will lead to improved tools for process control, improving both product quality and safety.

The work supported by this grant began in fiscal year 1995. The project received appropriations of \$181,000 in fiscal years 1995 and 1996. A total of \$362,000 has been appropriated. Non-federal funds include \$26,000 from state funds and \$70,000 from industry memberships in the Center which provide project support.

Research is being conducted in the laboratories of the Ohio State University and at various companies involved in the projects. The principal investigators anticipate that the proposed work supported by this grant will continue through January 1997.

CENTER FOR RURAL STUDIES, VERMONT

The University has developed a database and State-wide information resource of social and economic indicators for small business and community economic development. Businesses, institutions, and citizen groups in the State can request technical assistance from the Center in developing their business plans or strategic plans for their town or rural community. In addition the database is used by planners and analysts to help determine State-wide trends and conditions affecting rural development. Current applications include the development of a technical assistance network via Internet. The principal researcher believes that the database and analytical capability provide technical indicators and timely information to support entrepreneurial and community development activities in the State. The program is conducted in concert with other University and State agency outreach activities.

The original goal was to create a database and analytical capability for rural development in Vermont. Examples of past accomplishments include thematic maps presented to help target child hunger programs and target places for programmatic intervention; analytical reports provided to a retail shopping mall to help it attract new business to fill vacant space; and a reference volume, "Economic Handbook for Vermont Counties," produced for public distribution to help Vermont citizens and leaders answer the most frequently asked questions about their State or its counties.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992-1993 was \$37,000 per year; fiscal year 1994, \$35,000; and fiscal years 1995 and 1996, \$32,000 per year. A total of \$173,000 has been appropriated.

Prior to receipt of any Federal funds in fiscal year 1991, the Center was supported by \$91,130 in State and other non-federal funds. In fiscal year 1992,

these funds increased to \$101,298 and to \$143,124 in fiscal year 1993. The amount of non-federal dollars was \$3,547 for 1995-1996 plus researcher's salary.

Research is being conducted at the University of Vermont. The University researchers have not provided a termination date.

CHESAPEAKE BAY AQUACULTURE, MARYLAND

The objective of this research is to improve the culture of striped bass through genetics, reproductive biology, nutrition, health management, waste management and product quality. The research provides a good balance between basic and applied research. The principal researcher believes the Mid-Atlantic region of the country has significant opportunities to contribute to the overall development of the domestic aquaculture industry. Research supported through this program can have broad application and enhance production efficiency and the sustainability of aquaculture as a form of production agriculture.

The original research goal was to generate new knowledge that can be utilized by the aquaculture industry to address serious problems limiting the expansion of the industry in Maryland and the Mid-Atlantic region. The program continues to focus on the areas of reproductive biology, broodstock improvement, nutritional biochemistry, and fish health. Research in the area of reproductive biology has led to controlled artificial spawning of the striped bass. Researchers continue to make progress in developing domestic stocks of striped bass for commercial aquaculture. Scientists are conducting studies to characterize waste production as a function of feeding levels to reduce waste generation in striped bass production systems.

The work supported under this grant began in fiscal year 1990 and the appropriation for fiscal year 1990 was \$370,000. The fiscal years 1991-1993 was \$437,000 per year, fiscal year 1994, \$411,000, and fiscal years 1995-1996 \$370,000, each year. A total of \$2,832,000 has been appropriated.

The university reports the amount of non-federal funding for this program is as follows: in fiscal years 1991 and 1992, \$200,000; in fiscal years 1993 and 1994, \$175,000; and in fiscal year 1995 \$400,000. The university reports that these funds are from direct state appropriations and other non-federal funding sources.

Research is being conducted at the University of Maryland. The university researchers anticipate that the work will be completed in fiscal year 1999.

COMPETITIVENESS OF AGRICULTURE PRODUCTS, WASHINGTON

This grant is to improve the global competitiveness of value-added agricultural and forest products produced in the Pacific Northwest region through identifying and conducting needed research and disseminating the results through various activities such as trade shows, international conferences, and a variety of media. Research focuses on foreign market assessments, product development,

and policy and trade barriers. The principal researcher believes rural economic development and growth of the Pacific Northwest region is dependent upon the ability of the agricultural and forest products sectors to penetrate overseas markets, especially in Pacific Rim countries. Japan and China present especially attractive prospects for both food and forest products. Although this research has a regional focus, results are often adaptable to other regions of the U.S.

The original goal was to conduct a research program that would support the development of export markets for value-added food and forest products produced in the Pacific Northwest. Washington State University has played a key role in expanding the export of apples to Japan, and has begun a major study of apple supply, demand, and trade in North Asia. Research is examining the potential market for U.S. fruits, vegetables, legumes, and hops in Panama and Costa Rica; and, in this connection, is examining the potential of MERCOSUR, the Latin American free trade area. Test shipments of a new "baby" asparagus product to Japan were completed. Two Japanese vegetables, burdock and lotus root, were grown in experimental plots. Work continues on improving end-use properties of grains and legumes exported from the Pacific Northwest to meet special end-use needs in foreign markets. Visits with Korean and Chinese authorities on building codes and standards help ensure that U.S. products are not discriminated against on technicalities in those countries. A very successful project "China as a Market and a Competitor" is nearing completion.

The University of Washington's Center for International Trade in Forest Products, CINTRAFOR, is studying the potential for barter wood trade between Russia and China. They are examining markets for clearwood, material substitution in the U.S. construction industry and markets for prefabricated housing in Japan, and progress in developing Siberia's wood-producing potential. Work continues on a Global Trade Model of Forest Products.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992-1993 was \$800,000 per year; fiscal year 1994, \$752,000; and fiscal years 1995-96, \$677,000 each year. A total of \$3,706,000 has been appropriated.

The non-federal funds and sources provided, for this grant are as follows: \$716,986 State appropriations, \$209,622 product sales, \$114,000 industry, and \$661,119 miscellaneous for a total of \$1,701,727 in 1991; \$727,345 State appropriations, \$114,581 product sales, \$299,000 industry, and \$347,425 miscellaneous for a total of \$1,488,351 in 1992; \$1,259,437 State appropriations, \$55,089 product sales, \$131,000 industry, and \$3,000 miscellaneous for a total of \$1,448,526 in 1993; \$801,000 State appropriations, \$1,055,000 product sales, \$1,040,000 industry, and \$244,000 miscellaneous for a total of \$3,140,000 in 1994; and \$810,000 state appropriations, \$42,970 product sales, \$785,000 industry, and a \$2,000,000 gift of a ranch due to the IMPACT Center's research on Wagyu Cattle, for a total of \$3,637,870 in 1995. The preliminary allocation for 1996 is \$844,000 State appropriations, \$45,000 product sales, \$900,000 industry, and \$45,000 miscellaneous for a total of \$1,789,000.

The research program is being carried out by the International Trade Development Center, IMPACT, at Washington State University, Pullman, and the Center for International Trade in Forest Products, CINTRAFOR, at the University of Washington, Seattle. This is a continuing program of research with several long-term, crop improvement projects. With the exception of the improvement projects, most of the work can be completed by 1999.

COOL SEASON LEGUME RESEARCH

The Cool Season Legume Research Program involves projects to improve efficiency and sustainability of pea, lentil, chickpea and fava bean cropping systems collaborative research. Scientist from seven states where these crops are grown have developed cooperative research projects directed toward crop improvement, crop protection, crop management and human nutrition/product development. The principal researcher believes the original goal of this project was to improve efficiency and sustainability of cool season food legumes through an integrated collaborative research program and genetic resistance to important virus diseases in peas and lentils. Evaluation studies of biocontrol agents for root disease organisms on peas are underway. Other studies are evaluating integration of genetic resistance and chemical control. Considerable progress has been made using biotechnology to facilitate gene identification and transfer. Management system studies have addressed tillage and weed control issues.

The work supported by this grant began in fiscal year 1991 with appropriations for fiscal year 1991 of \$375,000; fiscal year 1992 and 1993 \$387,000 per year; fiscal year 1994, \$364,000; fiscal year 1995, \$103,000; and fiscal year 1996, \$329,000. A total of \$1,945,000 has been appropriated.

The nonfederal funds provided for this grant were as follows: 1991. \$304,761 state appropriations, \$14,000 industry, and \$18,071 other nonfederal; 1992, \$364,851 state appropriations, \$15,000 industry, and \$14,000 other nonfederal; 1993, \$400,191 state appropriations, \$19,725 industry, and \$10,063, other nonfederal; and 1994, \$147,607 nonfederal support. Nonfederal support for 1995 was \$150,607.

Research has been conducted at agricultural experiment stations in Idaho, Oregon, Washington, Wisconsin, Minnesota, New York and New Hampshire. The funds have been awarded competitively among participating states and not all states receive funds each year. The current research is anticipated to run through fiscal year 2000.

CRANBERRY-BLUEBERRY DISEASE AND BREEDING, NEW JERSEY

The overall focus of this work has dealt with the development of cultural management methods that will reduce losses to cranberry and blueberry production due to disease, insect, and climatic factors while minimizing the use of pesticides; and, increasing levels of disease resistance, improved fruit quality and productivity through genetic enhancement of both crop species. The principal researcher believes this work clearly involves diseases having impacts on New Jersey's

cranberry and blueberry industries, but the findings here are closely followed by scientists in Michigan, New England, and Wisconsin.

The original goal was the development of cranberry and blueberry cultivars compatible with new disease and environmentally-compatible production management strategies. This continues to be the goal. Over 100 blueberry and 80 cranberry selections were identified for advanced testing. Wild diploid blueberry accessions were identified as having resistance to secondary infection by mummy berry disease. The seasonal life history of the spotted fireworm was determined. The insecticide dimethoate was identified as a potential alternative to existing chemical control options. A monitoring system for cranberry fruitworm was developed. It was determined that one of the most prevalent fruit-rotting fungi, *Glomerella cingulata*, was tolerant to chlorothalonil, the most commonly-utilized fungicide for control of the disease. Molecular genetic markers were constructed for species identification and elucidation of the population of *Glomerella cingulata*. New Jersey researchers also identified and determined distributions of six major fruit-rotting species over a two-year period from 1994 through 1995.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$100,000; fiscal years 1986-1987, \$95,000 per year; fiscal years 1988-1989, \$260,000 per year; fiscal year 1990, \$275,000; fiscal years 1991-1993, \$260,000 per year; fiscal year 1994, \$244,000; and fiscal years 1995-1996, \$220,000 each year. A total of \$2,549,000 has been appropriated.

The non-federal funds and sources provided for this grant were \$400,000 state appropriations, \$90,000 industry, \$50,000 product sales, and \$25,000 miscellaneous in 1994. Fiscal year 1995 non-federal contributions were in experiment station contributions of personnel support for the principal investigator and three senior associates.

This research is being conducted at the New Jersey Agricultural Experiment Station. The researchers now anticipate that an additional four to ten years of research is necessary.

DAIRY AND MEAT GOAT RESEARCH, PRAIRIE VIEW A&M, TEXAS

The program has addressed a range of issues associated with goat production. Research by scientists at the International Dairy Goat Center, Prairie View A&M University, focuses on problems affecting goat production in the United States. Issues included are the study of nutritional requirements of goats, disease problems, methods to improve reproductive efficiency in the doe, the use of gene transfer to improve caprine genetics and the evaluation of breeding schemes to improve meat and milk production. The principal researcher believes that nationally, most of the farm enterprises that include goats are diverse and maintain a relatively small number of animals. Responding to disease, nutrition, breeding and management problems will improve efficiency of production and economic returns to the enterprise.

The original goal of this research was to conduct research that will lead to improvement in goat production among the many small producers in the United States. Research has been conducted to develop and improve nutritional standards, improve genetic lines for meat and milk production and to define mechanisms that impede reproductive efficiency in goats.

Grants have been awarded through appropriated funds as follows: \$100,000 per year for fiscal years 1983-1985; \$95,000 per year for fiscal years 1986-1988; no funds were appropriated in fiscal year 1989; \$74,000 for fiscal year 1990; \$75,000 per year for fiscal years 1991-1993; \$70,000 for fiscal year 1994; and \$63,000 for fiscal years 1995-1996 each year. A total of \$1,080,000 has been appropriated. The university reports no non-federal funds expended on this program.

Research is being conducted at Prairie View A&M University in Texas. The university researchers anticipate that work will be completed in fiscal year 1997.

DELTA RURAL REVITALIZATION, MISSISSIPPI

This project has gone through several phases in the delineation of a strategy for a long-range development plan for the Mississippi Delta region. Phase I was completed with the delivery of a baseline assessment of the economic, social, and political factors that enhance or impede the advancement of the region. Phase II of the project evaluated the potential for entrepreneurship and small business creation as mechanisms to improve economic conditions. Phase III is now in its second year. It focuses on technical assistance to Delta region manufacturing firms to strengthen their ability to provide employment and incomes. Phase III will be continued into the 1994 proposal which was requested and awarded in September 1994. It will continue emphasis on technical assistance to industry and the further development of a special industrial support database and analysis unit located at Stoneville, Mississippi. For 1995 Research is directed to development of continuous improvement of small industries. The principal researcher believes that the counties that comprise the Mississippi Delta region in Northwestern Mississippi have traditionally been among the poorest counties in the United States for well over a century. The cotton economy that made the Delta region famous has been subjected to many external forces as well as changes within the agricultural sector. The project will help diversify the agriculturally dominant economy by encouraging an industrial development and growth process to provide new jobs and new sources of income for Delta residents.

The original goal was to create an analytical baseline for the Delta region. A publication titled, "A Social and Economic Portrait of the Delta," serves as an analytical baseline for further work. The second phase of the project created a Delta Inventors Society to assist creative persons in developing ideas which can be successfully commercialized, and a companion Entrepreneurial Forum was established to help new business ventures with start-up advice and assistance. Finally, a Venture Capital Association was formed to help both inventors and businessmen find capital resources to carry out their plans. A report covering the

creation and initial activities of these groups was prepared in 1992. Evaluation of the impacts of these efforts will continue through September 1995. The focus of the project now has clearly shifted to industrial technical assistance, and the fiscal year 1994 proposal includes provisions to hire a qualified industrial consultant to work with selected Delta firms in a program of self improvement. It is understood that the consultant will conduct industry surveys and develop industry inventories to help create a regional strategic plan to develop new markets for non-agricultural products from the Delta. With an independent database and analytical unit to monitor Delta economic factors, the impacts of the technical assistance can be determined over time.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$175,000; fiscal year 1990, \$173,000; fiscal years 1991-1993, \$175,000 per year; fiscal year 1994, \$164,000; and fiscal years 1995 and 1996, \$148,000 per year. A total of \$1,333,000 has been appropriated.

Total non-federal funds directed to this project, as reported by Mississippi State University, are: fiscal year 1991, \$117,866; fiscal year 1992, \$84,402; and fiscal year 1993, \$68,961. These numbers include State and other non-federal sources under University accountancy. They do not include the indirect or direct contributions of local development organizations or commitments made by local industrial firms in collaboration with the project. It is not possible to accurately reconstruct the value of the latter items. Reports for fiscal year 1994, 1995 and 1996 are incomplete at this time.

Research is being conducted at Mississippi State University. The funding awarded to date will continue to support evaluation studies through September 1998.

DRIED BEAN RESEARCH, NORTH DAKOTA

This project was designed to develop cultivars of edible dry beans with improved biological efficiency, pest resistance and nutritional quality for production in North Dakota. In addition, the research is intended to develop management practices which will reduce disease and improve yield and quality. The principal researcher believes the regional need for this research is to maintain a stable production of edible dry beans in the northern Great Plains. Diseases have a significant negative impact on bean seed quality and yield. Improved disease resistance and disease forecasting systems are needed for the crop to remain economically competitive.

The original goal of this research was to develop cultivars with disease resistance and other yield potential which would allow North Dakota dry bean farmers to remain competitive in the domestic and world market. Results to date include release of new cultivars that mature early, are high yielding with improved disease resistance and seed quality. Exotic germ plasm with resistance to bean rust has been introduced, and several sources of tolerance to common blight have been identified. Pesticide timing studies are contributing to improvement production management.

The work supported by this grant began in fiscal year 1977 and appropriations were for fiscal years 1977-1981, \$25,000 per year; fiscal year 1982, \$24,000; fiscal years 1983-1984, \$25,000 per year; fiscal year 1985, \$50,000; fiscal year 1986, \$87,000; fiscal years 1987- 1989, \$75,000 per year; fiscal year 1990, \$87,000; fiscal year 1991, \$93,000; fiscal years 1992-1993, \$100,000 per year; fiscal year 1994, \$94,000; and fiscal years 1995-1996, \$85,000 each year. A total of \$1,205,000, has been appropriated.

The nonfederal funds provided for this grant were as follows: 1992, \$38,422 state appropriations and \$12,843 other nonfederal; 1993, \$38,329 state appropriations and \$16,938 other nonfederal; 1994, \$56,099 other nonfederal; and 1995, \$71,618 nonfederal funds.

This research is being conducted at the North Dakota Agricultural Experiment Station, North Dakota State University. The university researchers anticipate that this work may be completed in fiscal year 1996.

DROUGHT MITIGATION, NEBRASKA

This grant will support the continuation of the National Drought Mitigation Center program in the Department of Agricultural Meteorology at the University of Nebraska. The Center is developing a comprehensive program aimed at lessening societal vulnerability to drought by promoting and conducting research on drought mitigation and preparedness technologies, improving coordination of drought-related activities and action within and between levels of government, and assisting in the development, dissemination, and implementation of appropriate mitigation and preparedness technologies in the public and private sectors. Emphasis is directed toward research and outreach projects and mitigation/management strategies and programs that stress preventive risk minimization measures rather than reactive actions. The principal researcher believes drought is a normal part of climate for virtually all regions of the United States. The impacts of drought are diverse and affect the economic, environmental, and social sectors of society. Almost without exception, the occurrence of widespread severe drought in recent years has illustrated the inadequacy of existing assessment, mitigation, response, and planning efforts at the Federal, state, and local level. Rather than the "crisis management" of the past, a "risk management" approach is needed where the emphasis is on preventative measures, preparedness, education, and mitigation strategies.

The original goal of this research was to create a National Drought Mitigation Center and develop a comprehensive program aimed at lessening societal vulnerability to drought. The Center has created an information clearinghouse for drought mitigation technologies and associated informational products. This has been accomplished primarily through the development of a national drought management information system. The purpose of this system is to network potential users of drought-related information with information that would otherwise be unavailable or inaccessible to users. The system is an electronic, interactive guide available via a World Wide Web site on the Internet.

During the Center's first year of funding, attention was directed first at networking with officials in the public sector because these linkages are more obvious and already exist in many cases. Beginning in January 1996, the Center will initiate a substantial networking effort aimed at the private sector. The Center is presenting a paper on the Center at Conserv96, a professional meeting sponsored by the American Water Works Association, American Water Resources Association, and American Society of Civil Engineers. This meeting will bring together hundreds of water professionals from the public and private sector.

Drought Network News is published by the International Drought Information Center and the National Drought Mitigation Center and distributed to more than 1,700 people three times per year. The Drought Network News has been published since 1989 and provides information to scientists and policy makers on a wide range of drought-related issues pertaining to drought management and preparedness. The costs associated with producing and distributing this newsletter to domestic members of the network are budgeted in this proposal. The newsletter's production and distribution costs to international network members are being supported by the World Meteorological Organization and National Oceanic and Atmospheric Administration's International Activities Division.

The work supported by this grant received an appropriation of \$200,000 in fiscal years 1995 and 1996 per year for a total appropriation of \$400,000. The University of Nebraska contributed \$75,737 of non-federal funds in support of this research in fiscal year 1995 and \$58,977 in fiscal year 1996.

The research will be conducted at the University of Nebraska-Lincoln. The researchers anticipate that the work may be completed in fiscal year 2000.

ENVIRONMENTAL RESEARCH, NEW YORK

The environmental research in New York consists of two main thrusts which are aimed at understanding the nitrogen flowing from agricultural activities and their impacts on adjacent ecosystem components, and the agricultural dimensions of global climate change. Included in the program are a technology transfer aspect and an environmental assessment activity. The principal researcher believes the research being conducted is unique in that nothing comparable is being done in the region or the nation. There are needs to understand the impacts of ecosystem components upon each other; as global change occurs these needs will increase.

The main objectives of this program are to identify and address interactions and feedbacks between agricultural ecosystems, natural ecosystems, and natural resources which affect the long-term well being of each. Agroecosystem management strategies that maintain agricultural productivity and environmental quality will be devised. Policies will be established for addressing problems at the interface between agriculture and the environment. Ongoing program activities are intended to meet the mentioned objectives. Some examples of projects are as follows: Several aspects of nitrogen supply interactions with crops and the recovery of fertilizer nitrogen at crop harvest. Water quality research has been

focussed on the relation of intensive animal production areas and contamination caused by nitrates. Geographic Information System capability is being developed to make feasible various scenarios regarding the future of agriculture in broad landscape changes.

In the sixth year of the program, the principal investigators propose to reduce the level of research on the two main themes of their program to date, namely nitrogen flows from agricultural ecosystems to non-agricultural ecosystems and groundwater, and the impact of climate change on agriculture. Continuation of their involvement with the Remington Farms Sustainable Agriculture Project on the Eastern Shore of Maryland will extend the results of their nitrogen research programs to other farms. They will also initiate two projects that focus on intervention strategies to improve management of agricultural systems; one will explore the potential for reducing herbicide use by using weather forecasts to predict weed competition, and the second will explore the use of constructed wetlands to off-set barnyard run-off. The principal investigators will expand their activities in watershed management by increasing support to the program that was begun last year.

The work supported by this grant began in fiscal year 1991 with an appropriation of \$297,000. The fiscal years 1992-1993 appropriation was \$575,000 per year; \$540,000 in fiscal year 1994; and fiscal years 1995 and 1996, \$486,000 each year. A total of \$2,959,000 has been appropriated.

In fiscal year 1991, Cornell University provided \$27,893 and the State of New York provided \$118,014. In fiscal year 1992, Cornell University provided \$37,476 and the State of New York \$188,915. In fiscal year 1993, Cornell University provided \$13,650 and the State of New York \$243,251. In fiscal year 1994, the State of New York provided \$214,989. In fiscal year 1995, the State of New York provided \$233,085.

This research is being conducted at Cornell University. The University researchers anticipate that this work may be completed in 1996.

EXPANDED WHEAT PASTURE, OKLAHOMA

This project was designed to develop improved supplementation programs and new systems for technology delivery to reduce production risk of raising cattle on wheat pasture. The work involves evaluation of grazing termination date on grain and beef production, assess the impact of wheat cultural practices and develop an economic model to evaluate alternative decisions on grain/beef production. Additional effort is directed toward development of cool season perennial forage grasses to complement wheat pasture. The principal researcher believes that this work addresses the needs of wheat/cattle producers of Oklahoma as a primary focus. However, it would appear to have some application regionally in adjacent states.

The original goal of this research was to develop economically viable management systems for use of wheat for supplemental pasture for beef cattle

before the crop starts making grain. This work has already shown how the use of feed supplements can increase net profit from cattle grazing on wheat pasture. The study has identified management practices, e.g. date of planting, cultivar selection, grazing intensity and date of cattle removal that produce the optimum grain yield and cattle gain. A Wheat/Stocker Management Model has been developed as a decision aid to help producers assess income risk in the operation. Work is underway on a Wheat Grazing Systems simulation model.

The work supported by this grant began in fiscal year 1989 and appropriations were as follows: fiscal year 1989, \$400,000; fiscal year 1990, \$148,000; fiscal year 1991, \$275,000; fiscal years 1992-1993, \$337,000 per year; fiscal year 1994, \$317,000, and fiscal years 1995-1996, \$285,000 each year. A total of \$2,384,000 has been appropriated.

The nonfederal funds and sources provided for this grant were as follows: \$175,796 state appropriations in 1991; \$174,074 state appropriations in 1992; and \$236,584 state appropriations in 1993. The non-federal support for 1994 was \$238,058 for state appropriations. Funds for FY 1995 are \$275,426.

The research is being done at Oklahoma State University. The scientists estimate this work will be completed in fiscal year 1998.

FARM AND RURAL BUSINESS FINANCE: ILLINOIS AND ARKANSAS

The program's purpose is threefold. The first is to evaluate financial management and performance of farms and rural businesses and to continue development of farm financial management training programs. The second is to investigate pricing, credit evaluation, competitive relationships and other factors associated with financial markets and credit institutions serving rural America. The third is to analyze impacts of public policies and programs, including regulatory changes and geographic liberalization of commercial banking, on the structure and performance of rural financial markets. The principal researcher believes the need for the project is national in scope and stems from the farm and rural financial crisis during the past decade. Additional knowledge and improved information systems are needed to assist financial institutions in meeting the unique credit needs of agriculture and rural businesses. Such information is essential for the improvement of financial and risk management by borrowing groups. Further investigation is needed to evaluate risk pricing implications of alternative mechanisms for channeling outside equity capital into rural areas.

The goal is to assist farmers and rural businesses with research-based information on financial management as they deal with changing and increasingly complex financial markets. The program has completed projects on the effects of principal-agent relationships in agriculture on capital structure and investment, vertical coordination and financing arrangements in agriculture, financial effects of crop production conditions and farm program changes, and effects of interstate banking on agricultural firms. A Farm Credit System insurance risk simulation model has been developed and financial structures for small farms and rural

development have been analyzed. Results have been reported and disseminated through various publications and media outlets.

The work has been underway since 1992. Appropriations were \$125,000 in FY 1992, \$125,000 in FY 1993, \$118,000 in FY 1994, \$106,000 in FY 1995, and \$106,000 in FY 1996. Appropriations through FY 1996 total \$580,000.

The non-federal sources and funds provided for this program are as follows: In FY 1992,, \$58,427 in State appropriations, \$189,000 from industry and \$12,000 from miscellaneous sources for a total of \$259,427; in FY1992, \$94,588 in State appropriations, \$133,000 from industry and \$25,000 from miscellaneous sources for a total of \$287,890; in FY1994, \$221,000 from State appropriations, \$45,000 from industry and \$125,000 from miscellaneous sources for a total of \$391,000; and in FY1995, \$46,000 from State appropriations and \$62,500 from industry for a total of \$185,000. In FY1996, \$294,000 has been appropriated from State sources and \$50,000 from private sources.

The work is being carried out at the University of Illinois and the University of Arkansas. This principal researchers consider this program to be an on-going effort with additional funding needs. Projects currently underway are scheduled to be completed by December 1997.

FLORICULTURE, HAWAII

The floriculture research program in Hawaii focuses on obtaining basic market research data on U.S. and Japanese wholesale, retail, and consumer preferences for Hawaii anthuriums, orchids, protea, and exotic tropical flowers, and based on consumer demands, the development of new cultivars using traditional breeding and genetic engineering. New cultivar development focuses on pest and disease resistance. Research also involves development and implementation of quarantine pest and disease management strategies which minimize the use of pesticides in order to export flowers to the mainland U.S. and Japan. The principal researcher believes the Hawaii tropical cut flower and foliage industry, which for the purposes of this grant includes anthurium, orchids, flowering gingers, bird of paradise, heliconia, protea, and cut foliage--ti leaves and other greens--is worth over \$54 million in grower sales with out-of-state sales as the primary market. Development of disease resistant cultivars and quarantine pest and disease management strategies which reduced pesticide usage are included in the national high priority improved pest management systems.

The original goal of the research was to develop superior Hawaii anthuriums, orchids, protea, and exotic tropical flower varieties with disease resistance, particularly to anthurium blight which devastated the Hawaii anthurium industry through the mid-1980's and reduced Hawaii's market share. Additionally, research focused on development of post-harvest handling practices and quarantine pest control. To date, a new anthurium cultivar has been patented and released. Additional blight resistant cultivars are being propagated and tested by the anthurium industry. Through agreements with South Africa, disease resistant protea germplasm has been obtained and is being used in the protea breeding

program. A post-harvest hot water dip treatment has been developed and is being used commercially on tolerant cutflower species to meet U.S. and California quarantine requirements.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$300,000, fiscal years 1990-1993, \$296,000 per year; fiscal year 1994, \$278,000; and fiscal years 1995-1996 \$250,000 each year. A total of \$2,262,000 has been appropriated. The non-federal funds and sources provided for this grant were as follows: \$87,937,000 state appropriations in 1995 and \$87,937,000 state appropriations in 1996.

Research is being conducted at the University of Hawaii-Manoa and Hilo. It is anticipated that the market research will be completed in fiscal year 1996. Because of the continual changing of consumer demands for new colors, shapes, and sizes of Hawaii anthuriums, orchids, protea, and exotic tropical flowers, new cultivars are required for Hawaii to maintain its competitive position for producing and marketing high quality flowers.

FOOD AND AGRICULTURE POLICY INSTITUTE, IOWA AND MISSOURI

The Food and Agriculture Policy Research Institute --FAPRI-- was established by Iowa State University and the University of Missouri, Columbia, in 1984. The purpose of the institute is to conduct comprehensive analyses and disseminate results about the economic impacts of U.S. food, farm, and trade policies to agricultural producers, agribusinessmen, and public policymakers. Iowa State conducts research on the economic interrelationships within and between domestic and foreign food and agricultural markets from the farm gate to market destinations; develops and maintains databases and analytical support systems to facilitate the analysis of agricultural and trade policy issues; and evaluates the impacts of U.S. and foreign commodity supply, demand, and public policy programs on agricultural trade. The University of Missouri maintains models of the domestic agricultural economy and directs its efforts primarily to the analysis of domestic policy issues. The two universities maintain linkages with a number of other universities who provide data and analytical support to the system.

The universities maintain a comprehensive analytical modeling system of the U.S. and international food and agricultural sectors to evaluate near- and long-term economic implications of alternative farm policies for the basic commodities. The system is capable of providing economic information on potential impacts out to 10 years in the future of farm policies on farm prices, income, output, government program costs and means to enhance the management of farm programs at the national level. The principal researcher believes the Nation's agricultural sector and its components are subject to numerous Federal policies and programs. The FAPRI is the only public supported, non-federal organization with the analytical capability to assess and evaluate the numerous public policies and programs affecting the agricultural sector and report results to a broad constituency including farmers, agribusinessmen, and Federal and State policymakers.

The original goal was to develop the analytical capability to assess and evaluate U.S. farm policies on the agricultural sector and disseminate the information to farmers, agribusinessmen, and public policymakers. The mission has been expanded to include assessment of trade and environmental policy impacts and their interaction with the agricultural sector at the national, regional, and farm level. The models in place are also used to assess fiscal and monetary policy implications and impacts of new technologies such as biotechnological innovations.

Both institutions maintain large econometrics models and data sets which are regularly updated to analyze farm and trade policy alternatives and the impacts of various programs on the several sub sectors of the agricultural economy. This update was especially valuable for conducting analyses to assess policy options for the 1995 farm bill. During the past year, the FAPRI completed over 60 studies addressing policy issues such as assessments of the Freedom to Farm proposal, the administration farm bill proposal, several of the Senate farm bill proposals (including marketing loans and revenue assurance) and the impact of alternative weather scenarios on various agricultural policy proposals. Numerous studies were completed addressing improvements made to the empirical modeling system to improve domestic and international policy capabilities. The FAPRI professionals made numerous public appearances throughout the U.S. to agricultural groups and Congressional committees addressing policy issues.

New thrusts include development of two new baselines to complement the existing agricultural baseline used for agricultural policy analysis. These are the resource and environmental baseline and the food-nutrition-health baseline. Completion and incorporation of these baselines into the existing model framework will provide an integrated procedure to assess environmental and health policies on the agricultural and food sectors and implications of agricultural policies on the environment and public health. FAPRI also plans to incorporate an aquaculture sector into its analytical program.

Grants have been awarded from funds appropriated as follows: fiscal years 1984-1985, \$450,000 per year; fiscal years 1986-1987, \$357,000 per year; fiscal year 1988, \$425,000; fiscal year 1989, \$463,000; fiscal year 1990, \$714,000; fiscal years 1991-1993, \$750,000 per year; fiscal year 1994, \$705,000; and fiscal years 1995-1996, \$850,000 each year. The total amount appropriated is \$7,871,000.

The non-federal funds and sources provided for this grant are as follows: \$260,355 State appropriations, \$113,565 industry, and \$37,913 miscellaneous for a total of \$411,833 in 1991; \$321,074 State appropriations, \$51,500 industry, and \$35,100 miscellaneous for a total of \$407,674 in 1992; \$234,796 State appropriations and \$70,378 industry for a total of \$305,174 in 1993; \$78,286 State appropriations, \$43,925 industry, and \$29,750 miscellaneous in 1994 for a total of \$151,961 in 1994; \$80,155 State appropriations, \$37,128 industry, and \$42,236 miscellaneous for a total of \$159,519 for 1995; and \$124,123 in State appropriations with no other funding for 1996.

The program is carried out at the Center for Agriculture and Rural Development, Iowa State University and the Center for National Food and Agricultural Policy, University of Missouri. This is a continuing program of research and analysis for the purpose of assessing farm and related policy actions and proposed actions likely to affect the agricultural sector and its components.

FOOD IRRADIATION, IOWA

Research has been conducted on (1) survival of pathogenic microorganisms to medium-dose irradiation at various dose-rates in fresh meats, (2) effect of packaging atmosphere on survival of pathogenic microorganisms and on product quality after irradiation at medium doses in pork, (3) reduction of microbial contaminants by combination of medium-dose irradiation and other processes in chicken and beef products, (4) comparison of radiation resistance of various isolates of bacterial pathogens to irradiation resistance of various isolates of bacterial pathogens to irradiation in beef and poultry products, and (5) shelf-life of fresh meat products after irradiation at medium doses. In addition, studies involving irradiation of foods not of animal origin are also being conducted, specifically low-dose irradiation of strawberries for shelf-life extension, and irradiation of plant protein exudates to improve textural integrity of biodegradable plastics. In addition, studies on the effect of irradiation conditions on quality of beef, pork, and poultry have been conducted. Specifically, the effects of product temperature, packaging atmosphere and dose on lipid oxidation, color, and microbial quality have been studied and coupled with sensory evaluation of such products after broiling, in comparison with unirradiated samples. The principal researcher believes consumers' attention and concern about the safety of fresh meat has increased with recent outbreaks of foodborne illness from *E. coli* 0157:H7. The meat industry has also expressed interest regarding the quality of irradiated products, and how this process can be used to yield high quality fresh meats that are free of pathogens.

The original goal of the research was to generate knowledge necessary to develop a research and technology transfer program leading to commercial use of irradiation of foods, whereby consumers would be provided with food products with enhanced safety. The effectiveness of irradiation, using an electron beam accelerator, in destroying known pathogenic bacteria in pork and beef has been determined. The effectiveness of combinations of irradiation and other protective technologies in destroying pathogens in foods is under evaluation. Demonstration of irradiation technology has been presented to some commercial firms.

The work supported by this grant began in fiscal year 1991 when \$100,000 was appropriated for this project. The appropriations for fiscal years 1992 and 1993 were \$237,000 per year; fiscal year 1994, \$223,000; and fiscal years 1995-1996, \$201,000 each year. A total of \$1,199,000 has been appropriated.

The project received \$1,037,270 in State of Iowa funds--\$1 million of which was for capital construction--in fiscal year 1991; \$37,942 in state funds and \$67,800 in industry grants in fiscal year 1992; \$68,897 in state funds, \$78,300 in industry grants and \$9,666 in user fees in fiscal year 1993; \$70,652 in state funds,

\$35,420 in industry grants and \$47,788 in user fees in fiscal year 1994; and \$72,772 in state funds, \$100,000 in industry grants and \$55,211 in user fees in fiscal year 1995.

Research is being conducted at Iowa State University. The principal investigator anticipates that the project will continue through 1997.

FOOD MARKETING POLICY CENTER, CONNECTICUT

The Food Marketing Policy Center was established in 1988 at the University of Connecticut at Storrs. It conducts interdisciplinary research on food and agricultural marketing and related public policy issues that influence the economic performance of the food marketing system. Emphasis is on studies of how public policies and private sector organization and strategies affect industry competitiveness and the delivery of food and services, their costs, prices, and safety. The Center works closely with the University of Massachusetts to carry out the research program. The principal researcher believes there is a national need to continually improve the economic efficiency and operation of the U.S. food marketing system for the benefit of farmers, marketers, and consumers.

The research goal is to identify marketing problems and assess alternatives that improve the economic performance of the U.S. agricultural and food marketing sector, and conduct research in conjunction with the Hatch regional research project NE-165, "Private Strategies, Public Policies and Food System Performance."

The Center completed a number of studies on food marketing, including a description of food quality issues and enhancement policies; private label food brands; advertising strategies of agricultural cooperatives; assessment of food retailing mergers and competition; and evaluation of state dairy regulations, branded product marketing strategies, supermarket chain entry, oligopsony in agricultural markets, and the impact of agricultural cooperatives on food processor market performance. The Center has developed analytical methods to assess market performance and sponsored workshops on industrial organization issues. Food safety economic issues are addressed in two books and at workshops that summarize research done at the center and the regional research project.

The Center implemented its comprehensive research plan. This grant will be used to support research on 12 projects with research targeted at three problem areas. They are factors shaping decisions by food firms and the consequent effects; impact assessment of public intervention on firm food safety and quality strategies; and analysis of public policies affecting competition in food markets. Projects include analyses of the effects of trade agreements on food quality and trade in food products; an assessment of the efficiency aspects of ex ante versus ex post approaches to food safety problems; firm strategic responses to food safety and nutrition regulation and effects on competition, market structure and food price levels; demographic patterns of food borne illness for high risk populations; market structure on food advertising activity; competitive strategies of cooperatives; basic

research on oligopoly theory; and publication of new data sets on the food industry.

Grants have been awarded from funds appropriated as follows: fiscal year 1988, \$150,000; fiscal year 1989, \$285,000; fiscal year 1990, \$373,000; fiscal years 1991-1993, \$393,000 per year; fiscal year 1994, \$369,000; and fiscal year 1995 and 1996, \$332,000 each year. A total of \$3,020,000 has been appropriated.

The non-federal funds and sources provided for this grant are State appropriations as follows: \$234,259 in fiscal year 1991; \$231,741 in fiscal year 1992; \$201,288 in fiscal year 1993; \$234,557 in fiscal year 1994; \$219,380 in fiscal year 1995; and \$134,399 in fiscal year 1996. The research is being carried out by the Connecticut Agricultural Experiment Station at Storrs. Work planned under this phase of the project is scheduled for completion with expiration of the current NE-165 regional research project in 1997.

FOOD PROCESSING CENTER, NEBRASKA

The University of Nebraska Food Processing Center has been conducting short-term, highly applied research projects to assist small and mid-sized food processing companies and entrepreneurs to develop or improve processes and products and to develop new food processing enterprises. Priorities were placed on projects relating to the safety of the food product or process and to the fulfillment of regulatory mandates such as nutrition labeling, use of approved and effective ingredients, and adherence to regulations imposed by foreign governments. In addition, several research projects were conducted to improve or assess the quality, extend the shelf-life, or assess or improve the processing efficiency of specialty food products which impacted several processors or used alternative agricultural products such as popcorn, dry edible beans, edamame soybeans, other novel legumes, and milkweed seed oil. The principal researcher believes the primary impact of this project will be statewide. Small and mid-sized food processing companies and entrepreneurs have limited technological capabilities for addressing issues related to product development, process development, product and process evaluation, food safety, quality assurance, and regulatory mandates. The short-term research and technology transfer projects conducted as part of this overall project will aid these companies in appropriately addressing these often times complicated issues.

The goal of the research is to assist small and mid-sized food processing companies and entrepreneurs to develop or improve processes and products and to develop new food processing enterprises. Technological evaluations were conducted for 166 individuals or companies interested in developing new food processing businesses. Twelve companies were assisted with product formulation modification for specific export markets. Basic microbiological assessments and/or specialized microbiological analyses were conducted for 35 entrepreneurs and companies, including extensive microbiological shelf-life assessments for three companies. Sanitation audits were conducted for 6 small and mid-sized companies in Nebraska. Nutritional analyses were conducted for 27 small to mid-sized Nebraska food companies who were preparing for the new nutritional labeling

regulations; several products were analyzed for some of these companies. Short term research projects were conducted on mold and mycotoxin contamination of popcorn, growth of foodborne bacterial pathogens in specialty bakery items, and the development of novel ingredients from dry edible beans and egg yolks. How long has this work been underway and how much has been appropriated by fiscal year through fiscal year 1996?

The work supported by this grant began in fiscal year 1992. The appropriations were \$50,000 per year for fiscal years 1992-1993; \$47,000 for fiscal year 1994; and \$42,000 for fiscal years 1995-1996 each year. A total of \$231,000 has been appropriated. The Food Processing Center received \$288,421 in State funds and \$907,899 in food industry grants and miscellaneous sources from 1992 through 1995.

Research is being conducted at the University of Nebraska. The principal investigator anticipates that research supported by fiscal year 1996 funds will be completed in 1997.

FOOD SYSTEMS RESEARCH GROUP, WISCONSIN

The Group conducts research on issues affecting the organization and competitiveness of the U.S. food system in domestic and international markets. The issues include new technologies, market structure, and government policies and programs. Studies have been completed on pricing of cheddar cheese; fed cattle and hogs; changes in private label product markets; causes of structural change in the flour milling, soybean oil milling, wet corn milling, cottonseed milling, beef packing, and broiler processing industries; competition in U.S. food markets; and the relationship between U.S. food market structure and the industry's performance in global markets. The principal researcher believes the U.S. food system is changing rapidly in response to a large number of global economic-social-technical changes. Research is needed to determine the effects of these change on the system's organization and performance, and to ascertain needed adjustments in public policies based upon sound research rather than untested hypotheses. There is a national need to assess and evaluate the organization and performance of the Nation's food industry to ensure that it continues to satisfy performance expectations of farmers and consumers and adheres to acceptable standards of conduct.

The original goal was to conduct research to assess and evaluate the organization and performance of the U.S. food industry and provide recommendations for improvements. The Food Systems Research Group has completed numerous studies on economic structure and performance issues of the U.S. food manufacturing and distribution system. Basic research is conducted on market theories; effects of mergers, new technologies, and firm conduct on industry structure and organization; factors affecting industry prices, profits, efficiency and progressiveness; and impact of public policies and regulations on food system organization and performance. Current research in progress includes an analysis of vertical coordination in the livestock sector; impact of structure and behavior on price for selected subsectors; a legal-economic analysis of cheese price

discovery by the National Cheese Exchange; impact of renewed competitive forces on previously protected industries; and revision of a previously published book edition describing the structure and performance of the food industry.

Grants have been awarded from funds appropriated as follows: fiscal years 1976-1981, \$150,000 per year; fiscal years 1982-1985, \$156,000 per year; fiscal years 1986-1989, \$148,000 per year; fiscal year 1990, \$219,000; fiscal years 1991-1993, \$261,000 per year; fiscal year 1994, \$245,000; and fiscal years 1995-1996, \$221,000 per year. A total of \$3,805,000 has been appropriated. The non-federal funds and sources provided for this grant are as follows: State appropriations of \$120,304 in 1991; \$119,448 in 1992; \$85,188 in 1993; \$96,838 in 1994; \$100,869 in 1995; and \$101,272 in 1996.

The grant supports a core research group at the University of Wisconsin, Madison. The Food Systems Research Group expects to complete the existing plan-of-work in 1999 with some individual projects completed prior to that date.

FORESTRY RESEARCH, ARKANSAS

The Arkansas Forest Resources Center has offered programs of teaching and research to the landowners of Arkansas and the surrounding region. This has been done through offering continuing education workshops for landowners. The educational thrust has combined Center and private dollars to establish computer/software capability capable of use in the education of landowners and students. The Center includes one of only three ArcView learning centers for natural resources. The Center has acquired quality staff well versed in the use of advanced technologies. Initial research has stress problems largely unique to the area. These problems have included assessing and coping with the problems of ice damage in softwood stands, using the spatial capability to better integrate the transportation network with the resource base, developing biological control strategies for the Southern Pine Beetle. On a national level, work has begun on understanding and investigating various aspects of how genetics and environment interact in the partitioning of carbon in pine seedlings. The principal researcher believes that with the reduced levels of production of wood products from the Northwest, Southern forests are increasingly bearing the brunt of providing the majority of wood products for the United States. This increased production makes more imperative the appropriate and efficient balance in the use of Southern forests in producing timber and non-timber outputs. There is regional and national interest in developing appropriate approaches to the determination of outputs. The principal researcher believes this research to be of national, regional and local significance.

Developing alternative forest management strategies for achieving multi-resource objectives, i.e., joint production of timber, wildlife, recreation, and other outputs of the forest on private industrial and non-industrial forest lands and public forest lands, is the thrust of goal one of the project. To date, efforts have been largely devoted to identifying logical and consistent scenarios to serve as reference points when functional relations between joint products are developed. Specific projects initiated thus far in fiscal year 1996 include a broad array of research,

competitively awarded within the Center, concerned with best management practices, ecological characteristics, effects of different management intensities, streamside buffer zone effectiveness, ice damage assessment, and other efforts mentioned previously. Goal two is to evaluate and measure the environmental implications of forest management alternatives.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$470,000 and for fiscal year 1995 and 1996, \$523,000 each year. A total of \$1,516,000 has been appropriated.

During fiscal year 1993, in anticipation of work to be initiated in 1994, \$100,000 were provided by the Sturgis Foundation. During fiscal year 1994, the Sturgis Foundation provided \$10,000 and the Ross Foundation provided \$20,000. For fiscal year 1995, \$869,000 was gathered to support Center projects.

This research is being conducted at the School of Forest Resources of the University of Arkansas at Monticello. The University researchers anticipate that work may be completed in fiscal year 1998.

FRUIT AND VEGETABLE MARKET ANALYSIS, ARIZONA AND MISSOURI

The purpose is to provide timely knowledge of the impacts of trade, environmental, monetary, and other public policies and programs upon the Nation's fruit and vegetable industry to farmers, agribusinessmen, and policymakers through a program of empirical assessment and evaluation. The principal researcher believes the U.S. fruit and vegetable sector is experiencing increased growth from greater domestic and export demand. However, the growth of this sector depends upon its ability to compete domestically and internationally and to conform with the regulatory environment in which it operates. This program of research will provide information to farmers and policymakers on the implications and impacts of various policies and programs.

The goal is to develop the analytical capability to assess and evaluate public policies and programs impacting the U.S. fruit and vegetable industry and disseminate the results to users. Proposals have been submitted that outline long-range plans and specific projects for funding. Models have been developed for potatoes, fresh market tomatoes, onions, broccoli, lettuce, cauliflower, oranges and apples. This grant will be used to develop models for processing market tomatoes, strawberries, celery, cucumbers and green peppers. Trade models for those commodities with a significant import and/or export sector will also be developed. These models feed in to a larger food and agricultural sector model to support analyses of cross commodity and policy effects.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$329,000, and for fiscal years 1995-1996, \$296,000 each year. A total of \$921,000 has been appropriated.

The non-federal funding and its source provided to this grant in 1994 was \$50,073 State appropriations and \$11,000 industry for a total of \$61,073; \$21,876 State appropriations and \$36,624 industry for a total of \$58,500 for 1995; and a total of \$62,400 from State and industry sources expected for 1996.

The work is being carried out at Arizona State University and the University of Missouri. The university researchers anticipate that work is an ongoing project to look at the impact of various public policy proposals on the U.S. fruit and vegetable industry.

GENERIC COMMODITY PROMOTION, NEW YORK

The grant supports the National Institute on Commodity Promotion Research and Evaluation (NICPRE) to provide objective analysis of the results of national and state commodity checkoff programs designed to enhance domestic and export demand. The principal researcher believes National and State agricultural commodity groups conduct generic promotion programs, financed with producer check-off funds, to increase sales. More commodity groups are considering this approach to increase demand for their commodities in domestic and export markets. There are national and regional needs to ascertain the effectiveness of such programs because of the large number of dollars involved and several questions about their effectiveness.

The goal is to determine the economic effectiveness of generic promotion programs to increase the sales of agricultural commodities in domestic and international markets. Key economic relationships for advertising and promotion have been identified for milk and dairy products, beef, and cotton. A database of commodity advertising expenditures has been developed. New methods have been developed in the use of retail scanner data and in the estimation of relationships between advertising, promotion, government support programs and government policy. Projects underway will determine the impact of U.S. export promotion programs on exports of beef, pork, and wheat.

The work supported by the grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$235,000 and for fiscal years 1995-1996, \$212,000 each year. A total of \$659,000 has been appropriated. The non-federal matching funds and sources allocated to this grant by Cornell University are \$18,500 in State appropriations for 1994; \$46,688 in 1995; and \$46,584 in 1996. Collaborating institutions performing work under subcontractual agreements have not provided information.

The work is being carried out at Cornell University in collaboration with eight other land-grant universities. The university researchers anticipate that work planned for this phase of the program will be completed in 1999.

GLOBAL CHANGE

Radiation from the sun occurs in a spectrum of wavelengths with a majority of wavelengths being beneficial to humans and other living organisms. A

small portion of the short wavelength radiation, what is known as the Ultraviolet or UV-B Region of the spectrum, is harmful to many biological organisms. Fortunately, most of the UV-B radiation from the sun is absorbed by ozone located in the stratosphere and does not reach the surface of the earth. The discovery of a deterioration of the stratospheric ozone layer and the occurrence of an ozone hole over polar regions has raised concern about the real potential for increased UV-B irradiance reaching the surface of the earth and the significant negative impact this could have on all biological systems including man plus animals and plants of agricultural importance. There is an urgent need to determine the amount of UV-B radiation reaching the earth's surface and to learn more about the effect of this changing environmental force. The Cooperative State Research, Education and Extension Service--CSREES--is in the process of establishing a network for monitoring surface UV-B radiation which will meet the needs of the science community of the United States, and which will be compatible with similar networks being developed throughout the world. This grant is part of a government-wide initiative. The research is closely coordinated with other Federal agencies involved in the U. S. Global Change Research Program UV-Monitoring Network Plan.

The principal researcher believes destruction of the stratospheric ozone layer, our shield from the full intensity of solar radiation, continues to increase. This creates a high priority need for information to document the levels of UV-B radiation reaching the earth's surface. The United States, and the rest of the world, needs to know the strength of the UV-B radiation reaching the earth and the potential impact on all forms of life, especially animal and plant life of agriculturally-important species. The principal researcher believes this research to be of national as well as regional and local importance.

The network is to provide accurate, geographically-dispersed data on UV-B radiation reaching the surface of the earth and to detect trends over time in this type of radiation. A primary problem which must be overcome in order to reach this goal is the unavailability of instrumentation adequate to make the measurements required from the monitoring network. Two grants to design and build advanced spectroradiometers have been awarded under the National Research Initiative Competitive Grants Program. These instruments are to be used in a research network to make precise measurements of the total UV-B spectra at selected sites. The first of these instruments failed to meet spectral performance standards when tested and calibrated by the National Institute of Science and Technology. An alternative design which will result in a much larger and difficult instrument to deploy is currently under development. Concurrently, instruments of a different design and lower cost are being developed for deployment in a climatological network. Limited quantities of two different instruments which have just become available have been procured for deployment at least ten sites located across the United States during the spring of 1996 with plans to expand to thirty sites during the next year. To gain network experience, several broadband instruments along with ancillary instruments have been installed at ten selected field sites and operated for the last 16-24 months. Data from these sites are being transmitted daily to Colorado State University for analysis, distribution and archiving. These data are available, usually within 24 hours of collection, on the

Internet via a World Wide Web Site located at Colorado State University. The Department of Agriculture is also a participant in the development of a central calibration facility located at Department of Commerce facilities in Boulder, Colorado to ensure uniform and acceptable calibration and characterization of all instruments used in interagency UV-B monitoring programs.

The work supported by this grant began in fiscal year 1992, and the appropriation for fiscal years 1992-1993 was \$2,000,000 per year; fiscal year 1994 was \$1,175,000; fiscal year 1995 was \$1,625,000; and fiscal year 1996 is \$1,615,000; a total of \$8,415,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$162,000 state appropriations in 1993; \$183,106 state appropriations in 1994; and \$285,430 provided by Colorado State University in 1995.

Colorado State University is managing the operating network, which when completed will include all regions of the country. At least thirty sites are planned for the climatological network including sites in Hawaii, Alaska and Puerto Rico in order to provide broad geographic coverage. Ten sites have been operational with broad band instruments for up to two years, and it is planned to have at least twenty sites operational with new generation instruments by the end of fiscal year 1996. The research level network will begin with the first instrument to be installed at the Department of Energy Solar Radiation site near Ponca City, Oklahoma, as part of the Atmospheric Radiation Measurements field network. As with other weather and climate observations, this network will be an ongoing need for the predictable future. These measurements will provide information on the nature and seriousness of UV-B radiation in the United States and will provide ground truth validation to other predictions of UV-B irradiance.

GLOBAL MARKETING SUPPORT SERVICES, ARKANSAS

This grant supports the University of Arkansas Global Marketing Support Services (GMSS) program to provide research and service to agribusinesses. The objective of the university research is to identify potential foreign markets for Arkansas products and to conduct and disseminate foreign market assessment and evaluation studies to agribusiness firms. The principal researcher believes the emerging importance of global trade to the nation's economy and the reduction of trade barriers world-wide present unprecedented opportunities for cooperative public-private-university research to develop expertise in world markets.

The goal is to develop a university research and service organization to support international trade development activities by local area businesses. Research is conducted to determine the demand for specific Arkansas products in selected countries. Recent results include eight case studies, called "Industry/Company Opportunity Reports"; an evaluation of the food system in China, with emphasis on poultry sector; 18 fact sheets; a guide to getting started in international marketing; and a guide to developing international joint ventures. Additional research is underway to assess markets for rice, poultry, and soybeans in Mexico and Colombia.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$47,000; 1995, \$92,000; 1996, \$92,000. A total of \$231,000 has been appropriated. The non-federal funds and sources provided for this grant are \$90,000 per year in State appropriations for 1994-1996. An unreported amount of private funds are also involved.

This research is being conducted at the University of Arkansas, Fayetteville. The principal researcher anticipates that the project will be completed in 1999.

GRASS SEED CROPPING SYSTEMS FOR SUSTAINABLE AGRICULTURE

This program was developed to provide management systems for sustainable grass seed production without field burning of the straw residue following harvest which results in adverse air quality problems. Grass seed yields are often significantly reduced the following season if the residue is not burned. The principal researcher believes that according to information provided by technical committees representing researchers and the grass seed industry the regional need for this research is to develop sustainable systems of seed production that do not depend on field burning of straw residue. Much of the grass seed for the United States including lawn grasses is produced in the area. Field burning of straw residue creates unacceptable levels of air pollution and yields of some cultivar decline without burning.

- The original goal for this project is to develop grass seed production systems that do not depend on field burning of straw residue. To date joint planning by state experiment station administrators and researchers from the three states with industry input for an integrated regional research effort to solve the problem.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$470,000, and for fiscal years 1995-1996, \$423,000 each year. A total of \$1,316,000 has been appropriated. The nonfederal support for this project in fiscal year 1994 was \$266,055, and \$298,052 in fiscal year 1995.

The research will be conducted by the three state agricultural experiment stations in Idaho, Oregon and Washington. The university researchers anticipate that work may be completed in fiscal year 2001.

HUMAN NUTRITION, ARKANSAS

The researchers propose to address research on the broad area of developmental nutrition. They plan to investigate fat cell and bone development, vitamin metabolism, immunologic reactions to food, and assessment of eating and activity behavior. The principal researcher believes the research addresses the broad areas of food quality, nutrition and optimal health. The nutritional needs of the developing rural child are far from being understood, and refining the nutrient

requirements, assessing appropriate feeding techniques, and preventing life threatening diseases are important issues.

The original goal is to learn more about the role of nutrition and the mechanisms of nutrient action on the developing human so dietary recommendations can be made to families to ensure the safety and health of children and to prevent life threatening and debilitating diseases over the life span. This research was initially supported only in fiscal year 1994. Findings for one project are highlighted. An investigator identified specific developmental proteins in cells that were transforming into fat cells. Of the eleven such proteins, one was found to be unique and appears to be a newly discovered protein that may be extremely important in fat cell development.

Grants have been awarded from funds appropriated as follows: fiscal year 1994, \$470,000 and fiscal year 1996, \$425,000 for a total of \$895,000. The non-federal funds and sources provided for this grant are \$394,489 from private and university sources in 1994, and estimated to be \$386,248 from private and university sources in 1996.

Research will be conducted at the Arkansas Children's Hospital Research Institute affiliated with the University of Arkansas for Medical Sciences. The university researchers anticipate that work may be completed in fiscal year 1997.

HUMAN NUTRITION, IOWA

This research aims to develop animal and plant foods with nutritionally optimal fat content and to improve utilization of foods containing non-nutrient health protectants, components that may reduce health risks. The research includes human and animal nutrient utilization, consumer food choices, and economic impacts of nutritional optimization of food production and processing. The principal researcher believes the research addresses food quality, nutrition and optimal health. The challenge is to meet nutritional guidelines while maintaining or improving food quality for consumers in ways that are economically feasible.

The goal of the Center for Designing Foods to Improve Nutrition, the administrative unit for this proposal, is to improve human nutrition and health maintenance by determining how to optimize food systems to meet human nutritional needs. The food system approach includes production, processing, consumer choices, biological utilization, and economic impacts. The grant has supported the development of a low-fat ham snack food appealing to consumers. Pork containing more polyunsaturated fat was produced, and significantly lowered blood cholesterol of women compared with feeding traditional pork for four weeks. It was also found that 30 percent increased costs of production of this modified pork may be offset by the willingness of consumers to pay 30 percent more for such products. Because a related project found that animal products contributed more than half the fat in the diets of middle-aged men, this work suggests a feasible strategy for improvement of human health and reduction of cardiovascular disease risk.

Projects determining effects of potentially health protective food components found that oxygenated carotenoids potentially found in processed fruits and vegetables have greater antioxidant ability than the parent carotenoids. This greater antioxidant ability might be expected to decrease cancer and heart disease risk. Another project found that soybean isoflavones stimulated anticancer and antiviral activities of the human immune system, suggesting optimizing isoflavone intake may be a useful strategy for enhancing disease resistance.

The work supported by this grant began in fiscal year 1991 with an appropriation of \$300,000. The fiscal years 1992-1993 appropriation was \$500,000 per year; \$470,000 in fiscal year 1994; \$473,000 in fiscal year 1995; and \$473,000 in fiscal year 1996. A total of \$2,716,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$293,000 university, \$312,869 industry, and \$14,000 miscellaneous in 1991; \$90,000 state appropriations, \$473,608 university, \$131,160 industry, and \$116,560 miscellaneous in 1992; \$307,500 state appropriations, \$472,081 university, and \$222,267 industry in 1993; \$486,000 university and \$254,000 private in 1994; and \$210,000 university and \$200,000 private in 1995.

Research is being conducted at the Center for Designing Foods to Improve Nutrition, Iowa State University. The university researchers anticipate that current work may be completed in fiscal year 1998.

HUMAN NUTRITION, NEW YORK

The work focuses on the basic biological roles of selected nutrients and other food components which are expected to increase or fall as consumption patterns move toward dietary guidelines. The objectives are to develop strategies for improving methods to monitor plant-based food consumption, developing approaches to increase their consumption by school-aged children, and conducting an integrated analysis of availability, accessibility, and consumption of plant-based foods consumed locally. The principal researcher believes the research addresses the broad areas of food quality, nutrition and optimal health. The dietary guidelines give great prominence to plant foods. If these guidelines are adopted by all segments of the population to the degree that is recommended, the impact on our food system will be significant. This project aims to enhance the implementation of dietary guidelines by development of a regional food guide and to promote agricultural products of the Northeast.

The newly revised dietary guidelines reemphasize expected health benefits from the increased consumption of fruits, vegetables, and cereal grains. For the first time, guidance is given to Americans who partially or totally restrict their intakes to plant-based foods. The promotion of this dietary pattern and its growing adoption by Americans argue strongly for an increased understanding of the biological basis of expected benefits and risks and of effective methods to help individuals and communities secure the benefits and minimize any risks. Studies supported by this effort are contributing significantly towards these goals.

Protocols have been developed to study the conversion by humans of plant-derived beta-carotene to retinol and other biologically potent molecules. Initial experiments have demonstrated that the conversion of beta-carotene is more efficient than anticipated, but highly variable among individuals. These experiments demonstrate important methods to study normal beta-carotene metabolism and its role to protect or exacerbate the risk to specific cancers in diverse population groups. The study of a broad array of food components at physiological levels is now possible because of seminal advances in stable isotope technologies partially funded by this grant. Last year the researchers reported a 300-fold improvement of sensitivity in their high-precision, coupled liquid chromatography and mass spectrometry. Detection limits have been further enhanced by 30 to 40 times permitting the use of samples as small as 25 nanograms to produce a measurable signal. These methodological advances should aid in the detection of plant components key to desired health outcomes and to the improved understanding of their metabolic utilization.

Associated studies found that the low availability of sulfur-containing amino acids, a condition expected from most vegetarian diets, is associated with a relatively high capacity for glutathione synthesis. They concluded that this metabolic adaptation partially, or perhaps totally, preserves glutathione status thus the antioxidant function associated with glutathione is not impaired. Investigators using molecular biology techniques have cloned a hormone-sensitive lipase gene and developed probes needed to monitor this gene's product. In addition, the first stage of an integrated research community approach for increasing plant food consumption which emphasizes local control has been completed.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$450,000; fiscal years 1990-1991, \$556,000 per year; fiscal years 1992-1993, \$735,000 per year; fiscal year 1994, \$691,000; fiscal years 1995-1996, \$622,000 each year. A total of \$4,967,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$154,056 state appropriations and \$2,456 private in 1991; \$238,430 state appropriations and \$60,746 private in 1992; \$19,401 state appropriations and \$22,083 private in 1993; \$202,441 state appropriations and \$1,175 private in 1994; and \$296,794 state appropriations in 1995.

Research is being conducted at Cornell University, New York. The university researchers anticipate that work may be completed in 1997.

HUMAN NUTRITION, LOUISIANA

A series of studies on the differences in dietary fats is under active investigation at the Pennington Biomedical Research Center. This project consists of two major groups of studies. The first group explores the differing metabolic effects of the different dietary fats through feeding studies, metabolic chamber studies and fatty acids oxidation studies. The second group focuses on how gender, race and body composition influence response to dietary fats. The principal researcher believes nutrition is the bridge between agriculture and health.

This research focuses upon the roles of dietary fat and genetic differences in metabolic response to dietary fat. The results will expand the foundation for setting national dietary guidelines for individual fat intake.

The overall goal of this grant is to test the hypothesis that dietary fats have varying metabolic effects which depend upon genetic background, gender and race. To date, oxidation studies of 14 fatty acids have been studied in male and female subjects consuming diets of varying in fat composition. Two feeding studies with supplemental fish oils have been completed and the findings were submitted for publication. The Pennington Center has completed studies on the effects of depleting subjects of carbohydrate on the choice of carbohydrate or fat foods, depleting subjects of fat and measuring their intake of carbohydrate or fat foods, and effects of substituting indigestible fat for digestible fat. Studies on metabolism during exercise and high and low fat diets are underway. The Center has submitted plans for 6 experiments to be carried out over the next three years on dietary fat and gender, race and body composition.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal years 1991-1993 was \$800,000 per year; for fiscal years 1994-1996 was \$752,000 per year. A total of \$4,656,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$523,100 state appropriations in 1991; \$515,100 state appropriations and \$2,216,606 private in 1992; \$536,100 state appropriations and \$940,000 private in 1993; \$627,000 state appropriations and \$3,775,000 private in 1994; and \$546,100 state appropriations and \$3,100,000 private in 1995.

Research will be conducted at the Pennington Biomedical Research Center, Louisiana State University. The university researchers anticipate that current work may be completed in fiscal year 1998.

ILLINOIS-MISSOURI ALLIANCE FOR BIOTECHNOLOGY

The Illinois-Missouri Alliance has initiated a competitive grants program in agricultural biotechnology for research in targeted priority areas of need related to corn and soybeans. The scope of interest includes production, processing, marketing, utilization, inputs and support services, along with economic, social, environmental, and natural resource concerns. The Alliance has solicited research project proposals from scientists at Illinois and Missouri and other midwestern institutions, and have conducted peer reviews for science quality, commercial feasibility and potential economic impact to select the proposals that will be funded. The principal investigator has indicated that the goal of the Alliance is the pre-commercial development of emerging biotechnology discoveries for agriculture. The midwestern region produces more than half of the nation's output of corn and soybean crops, and is critical to domestic food security and U.S. competitiveness in global agricultural markets. The Alliance is implementing a research strategy that it hopes will generate important biotechnological developments rapidly adaptable to unique local soil, climatic and socioeconomic conditions of the region.

Fiscal year 1996 was the second year of funding for the Alliance. The research program is being focused on the two major commodity crops, corn and soybeans, as produced, processed and marketed in the midwest. The goal of this biotechnology program is to fund integrated research and development projects that will lead to specifically defined practical technologies for commercialization. The initial research projects to be funded will begin shortly. The projects to be initially funded include efforts to: 1) produce soybeans free of phytic acid to improve nutritional value and reduce phosphate pollution, 2) improve the protein quality of corn by increasing its lysine and tryptophane content, 3) increase oil content and change the fatty acid composition of soybeans to add value, and 4) commercialize a fast-acting recombinant baculovirus for control of European corn borer.

The work has been supported by this grant in fiscal years 1995 and 1996 and involve appropriations of \$1,357,000 each year. Thus, a total of \$2,714,000 has been appropriated. The Alliance has not specified a required amount of matching funds, but it is expected that most projects will have commitments for significant direct and in-kind non-federal support. Since Alliance projects are only now getting underway, the exact amount of the non-federal contribution is still unknown. The non-federal contribution is expected to be substantial, and a system for accounting for future non-federal contributions is in place.

The research projects identified above for funding in fiscal year 1995 will be conducted at the University of Illinois, the University of Missouri, and Iowa State University. Each project proposal for Alliance funding has a target date for completion. The four initial projects identified above are three-year studies with anticipated completions at the end of fiscal year 1998.

IMPROVED DAIRY MANAGEMENT PRACTICES, PENNSYLVANIA

The research focuses on developing methods to help dairy farmers in the adoption of new technology and management practices which lead to improved dairy farm profitability. The principal researcher believes the local need is the identification and implementation of profit enhancing management strategies for Pennsylvania dairy farms in response to changing market conditions and emerging technologies. The current focus is to develop economically-viable solutions to issues confronting Pennsylvania dairy farmers such as dealing with animal waste in an environmentally-friendly manner, reducing the cost of forage production systems, including grazing systems, and to develop a better understanding of decision processes by dairy farmers.

The original goal of this research remains the same, which is the development of methods to help dairy farmers in the adoption of new technology and management practices which lead to improved dairy farm profitability. A farm management survey is complete and analysis of results is in progress. Farm financial models have been developed and are undergoing field tests on selected farms. Workshops to teach elements of business management to dairy farmers have been conducted, and survey instruments are in place to monitor effectiveness of workshops. Research is currently underway to develop improved models for

nutrient management on northeastern dairy farms, to evaluate the potential role of intensive grazing systems to replace harvested forage, and to better understand how decisions are made by dairy farm families. Refinements of an expert computer-based system to assist dairy farmers in controlling the udder disease, mastitis, is underway.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$335,000 per year. The fiscal year 1994 appropriation was \$329,000 and \$296,000 in fiscal years 1995-1996 each year. A total of \$1,591,000 has been appropriated.

During fiscal year 1992, \$354,917 were from State funds, and \$16,000 from Industry, for a total of \$370,917. During fiscal year 1993, \$360,374 were from State funds and \$16,000 from Industry for a total of \$376,374. Information is not available for fiscal years 1994-1995.

Research is being conducted at Pennsylvania State University. The university researchers anticipate that work currently underway will be completed in August 1997.

IMPROVED FRUIT PRACTICES, MICHIGAN

This research will involve a multidisciplinary approach to reduce chemical use on apple, blueberry, and sour cherry, three important Michigan fruit crops, and improve the management of dry edible beans and sugar beets. Research will be conducted on crop management techniques and reduced chemical use. The principal researcher believes Michigan's need for this research is to develop and maintain/expand their tree fruit and small fruits industry. There is a need to improve the culture and management of dry edible beans and sugar beets.

The planned objectives of the research are to reduce the chemical contamination of the environment from fruit production and improve production practices for beans and beets through multidisciplinary research, including pesticides, and the development of new nonchemical production methods.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$494,000, and for fiscal years 1995-1996, \$445,000 each year. A total of \$1,384,000 has been appropriated. The nonfederal funds and sources provided for this grant in fiscal year 1994 were \$437,338 from state appropriations and \$135,000 from industry and for fiscal year 1995 were \$574,494 from state appropriations and \$127,000 from industry.

Research will be conducted at Michigan State University. The university researchers anticipate that work may be completed in fiscal year 1998.

INSTITUTE FOR FOOD SCIENCE AND ENGINEERING, ARKANSAS

The proposed Institute for Food Science and Engineering will provide technical advances in food processing and packaging that will foster safe, energy-

efficient, environmentally responsible processing methods that will assure that Arkansas and regional processors remain competitive. The Institute will also provide research that recovers or converts co-products to higher value-added items. The broad multidisciplinary research will facilitate and encourage faculty across departments and disciplines to conduct research and interact with industry and the consumer and will enable teams of scientists to share their talents and resources. The principal researcher believes the Institute will provide technical support and expertise to small and mid-sized food processors that usually do not possess adequate expertise in-house. The economy of the southern region will be improved through the creation of new jobs and a high multiplier effect from the research. The Institute will develop and disseminate scientific information and provide educational programs related to value-added further processing, storage and marketing of food products. These efforts will assure food safety, improve the sensory and nutritional quality of food and meet the nutritional requirements and food preferences of a changing society.

The original goal of this research is to establish an Institute of Food Science and Engineering at the University of Arkansas-Fayetteville. The Institute will serve as the primary entity in Arkansas for research, graduate education and extension to help ensure that the food supply is high quality, wholesome, palatable, safe, and nutritious; that value is added to raw agricultural products to enhance economic development of the state, region, and nation; and that the nutritional needs of society are understood, communicated and met.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 is \$750,000. The non-federal funds and sources provided for this grant include \$184,700 in state funds and \$93,000 from industry thus far in fiscal year 1996.

Research will be conducted at the University of Arkansas at Fayetteville. The researchers anticipate that work will be completed in fiscal year 2000.

INTEGRATED PEST MANAGEMENT/BIOLOGICAL CONTROL

Research supported by Integrated Pest Management special grants continues to provide a science basis for the development of alternative approaches for managing pests including insects, mites, weeds, plant pathogens, and ectoparasites. Emphasis of the program continues on enhanced natural control. Enhanced natural control emphasizes increased use of biological control, cultural control, and host resistance practices and the management of genetic resistance of the pest. Enhanced natural control is practiced in conjunction with select use of pesticides and biopesticides when pest monitoring programs indicate that pesticide use is essential. The principal researcher believes this research program is funding 40 to 50 grants per year. The grant program is managed by the four regions that prioritize request for proposals based on local knowledge of research priorities coupled with the national agenda for pest management. More recently, a limited number of joint research/extension proposals have been funded with research grant funds and extension special project funds to carry developmental research through technology transfer directly to the growers. In fiscal year 1997, greater emphasis

is planned for joint research/extension proposals identified by a comprehensive team planning effort in each state involving growers and grower consultant groups to insure that the programs and priorities are relevant to the needs of producers.

A great deal has been accomplished in the various areas of research needed to develop new knowledge and integrate technologies into improved management systems and to make these systems available to producers. Advancements are identified by the Western regional IPM grant program published in their Western Regional Integrated Pest Management Report 1995, Volume 4, by Colorado State University as follows: In Arizona and California IPM researchers are teaming up to combat whitefly infestations. Whitefly infestations are causing serious economic losses to the agriculture industry of the Southwestern United States. Understanding the population dynamics, disease vectoring, and movement of whitefly populations between host crops will allow greater pest control without increased pesticide use; In Oregon, studies demonstrated how pears can be safely stored for longer periods of time without losses from fruit rotting while awaiting shipment to market. Three cultural practices, coupled with a yeast discovered to inhibit fungal decay, have replaced postharvest fungicide sprays; Colorado researchers have recognized that insects and weeds can wreak even greater damage than expected when both pests are present in the same winter wheat fields. Researchers are looking for ways pests interact and how best to minimize damage they cause such as the use of crop rotations to control annual grassy weeds; The bacterium biopesticide *Bacillus thuringiensis*--B.t.--is beginning to come into widespread use. This is particularly true with the incorporation of DNA from B.t. bacteria into plants. At first some people thought that pests would not become resistant to B.t. toxins, but studies in Hawaii have now shown that field populations of diamondback moth treated repeatedly and intensively with B.t. have evolved resistance. Current studies on the use of a spatial refuge, an area free from B.t., indicate that a refuge might delay resistance; Russian knapweed has overrun large tracts of prime Western rangelands reducing rangeland values by 70 percent. Wyoming and Colorado researchers have developed methods to reclaim the land by herbicide treatments followed by tilling and seeding with desirable perennial grasses.

Grants have been awarded from funds appropriated as follows: fiscal year 1981, \$1,500,000; fiscal years 1982 through 1985, \$3,091,000 per year; fiscal years 1986 through 1989, \$2,940,000; fiscal year 1990, \$2,903,000; fiscal year 1991, \$4,000,000; fiscal years 1992 and 1993, \$4,457,000 per year; fiscal year 1994, \$3,034,000; and fiscal years 1995-1996, \$2,731,000 each year. A total of \$49,937,000 has been appropriated.

Non-federal funds are as follows: for fiscal year 1993, state appropriations, \$841,017, product sales, \$33,987, industry grants, \$17,081, and other, \$31,737; for fiscal year 1994, state appropriations, \$2,303,458, product sales, \$77,157, industry grants, \$210,110, and other, \$216,552. This research is being carried out in practically all of the State Agricultural Experiment Stations. There is a high priority for continuation of IPM research and for collaborative linkages with other research, extension, technology transfer, regulatory, and incentive programs to accomplish the transitions called for in the administration's

policy for reducing overall risks from the use of pesticides through integrated pest management programs which lead to more sustainable agricultural production strategies and reductions in the use of pesticides.

INTEGRATED PRODUCTION SYSTEMS, OKLAHOMA

This grant focuses on the development of efficient management systems for production of watermelons and blackberries under intensively managed conditions. The work will address biotic and abiotic production components under Southeastern Oklahoma conditions for use in production guidelines. This will include planting densities, fertilizer studies, weed management and insect and disease control. The principal researcher believes the need for this research is focused on the local area of Southeastern Oklahoma, an area that is economically depressed and in need of alternative crops to diversify the dominant cow/calf livestock production.

The original goal of this research was to develop new and alternative crops to supplement and diversify the cow/calf livestock agriculture of Southeastern Oklahoma with emphasis on horticultural crops. Work to date has shown promise for strawberries, blackberries, cabbage, melons and blueberries. CD-ROM technology transfer to research results to support an expert system will be developed for grower use.

Work supported by this grant started in fiscal year 1984 and the appropriations were: fiscal year 1984, \$200,000; fiscal year 1985, \$250,000; fiscal year 1986, \$238,000; fiscal years 1987-1989, \$188,000 per year; fiscal years 1990-1991, \$186,000 per year; fiscal year 1992, \$193,000; fiscal year 1993, \$190,000; fiscal year 1994, \$179,000; fiscal years 1995-1996, \$161,000 each year. A total of \$2,508,000 has been appropriated.

The nonfederal funds and sources provided for this grant were as follows: \$165,989 state appropriations in 1991; \$160,421 state appropriations in 1992; and \$164,278 state appropriations in 1993. Nonfederal support for 1994 was \$141,850 for state appropriations. Funds for fiscal year 1995 were \$129,552.

This research is being done at the West Watkins Agricultural Research and Extension Center at Lane, Oklahoma, a branch of the Oklahoma State Agricultural Experiment Station. The university researchers have indicated that each year of this grant there has been a separate project address some aspect of integrated production systems for the region. This project has a duration of two years. However, the program supported by the grant is anticipated to be complete in fiscal year 2001.

INTERNATIONAL ARID LANDS CONSORTIUM

Fiscal year 1995 was the second year that CSREES funded the International Arid Lands Consortium. The Forest Service supported the program during fiscal year 1993 to develop an ecological approach to multiple-use management and sustainable use of arid and semiarid lands. Projects that began in

1994 will continue to be funded to address issues of land reclamation, land use, water resources development and conservation, water quality, and inventory technology, e.g. remote sensing. The Consortium is devoted to the development, management and reclamation of arid and semi-arid lands in the United States, Israel, and elsewhere in the world. The International Arid Lands Consortium will work to achieve research and development, educational and training initiatives, and demonstration projects. The current member institutions are the University of Arizona, The University of Illinois, Jewish National Fund, New Mexico State University, South Dakota State University, Texas A&M University, Kingsville. The United States Department of Agriculture's Forest Service works very closely with The International Arid Lands Consortium through a service-wide memorandum of understanding.

The original goal of this consortium is to be acknowledged as the leading international organization supporting ecological sustainability of arid and semi-arid lands. To date, 24 projects have been funded, 17 of which are to conduct research and development, 4 for demonstration projects, and 3 for international workshops. Funds approximating \$1.25 million have been used to fund these projects.

International Arid Lands Consortium was incorporated in 1991. Funds were appropriated to the Forest Service in 1993. Additional funds were received during each of the years that followed. \$329,000 has been appropriated from CSREES for fiscal years 1994, 1995 and 1996 for total appropriations of \$987,000 for the 3-year period.

Members of the International Arid Lands Consortium have provided funds to support the consortium office in Tucson, Arizona, and for printed materials as needed. Each member has provided travel and operations support for semi-annual meetings, teleconferences, and other related activities. In fiscal years 1993-1995, \$60,000 in state appropriations were provided. Industry provided \$84,083 and \$100,000 in fiscal years 1993 and 1995, respectively. Amounts are not yet available for fiscal year 1996.

Research is currently being conducted at the University of Arizona, South Dakota State University, Texas A&M University, Kingsville, New Mexico State University, University of Illinois, and several research/education institutions in Israel. Research projects started in 1993 have been completed. The projects started in 1994 and 1995 are expected to be completed within 1-3 years depending upon the nature of the research. Several demonstration projects and international workshops were completed during 1994 and 1995. The International Arid Lands Consortium is an organization that has long-term goals that will require research and development for many years.

IOWA BIOTECHNOLOGY CONSORTIUM

Iowa State University and the University of Iowa, together with the City of Cedar Rapids, are conducting joint biotechnology research projects to develop and test methods to convert fermentation by-products from agricultural wastes into useful new products and/or to improve waste water treatment processes. The

intended outcome is to reduce the burden of waste products from bioprocessing plants on municipal treatment centers, while at the same time increasing opportunities to transform waste into commercially viable products. The specific aim of the present research is to provide a model to bridge our knowledge gap in several specific areas, including fermentation, enzyme catalysis and bioprocessing. The principal researcher believes that with the dramatic increase in biotechnological activity has come a concomitant need to increase the capacity and sophistication of waste management systems nationally. At present, a serious gap exists between the technological breakthroughs made possible by the rapid pace of scientific discoveries and the nation's capacity to deal with wastes from these new processes. There are large amounts of waste materials generated by biotechnological processing which can be used to create new industries and products. By focusing on recovery and recycling of materials of value from fermentation wastes, the burden on treatment plants is reduced, along with overall reductions in the costs and energy requirements for waste water treatment.

The original goal of this research remains to conduct fundamental and applied research aimed at enhancing the recovery and utilization of by-product materials arising from new and emerging industries using biotechnology. Program emphasis is on recycling of agricultural wastes, isolating useful byproducts and developing value added processing of them for economic and environmental benefits. The Consortium has made significant achievements in its work objectives. The Consortium is reaching out to establish a network of researchers to assist them in finding uses for the by-product streams as concentrated steep water, and to find methods to concentrate by-products for industrial uses. The Consortium is also making good progress in evaluating profitable uses of fats and carbohydrates through bioconversion, biocatalysis, membrane concentration, and bioseparation. Another avenue of research has shown that land application of wastes streams has considerable savings and benefits for crop production. Bioprocesses have been studied for economic significance and this information is being used to establish profitable technologies.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$1,225,000; fiscal year 1990, \$1,593,000; fiscal year 1991, \$1,756,000; fiscal year 1992, \$1,953,000; fiscal year 1993, \$2,000,000; fiscal year 1994, \$1,880,000; and fiscal years 1995-1996 \$1,792,000 each year. A total of \$13,991,000 has been appropriated.

Non-federal funds and sources provided for this grant were as follows: \$623,803 from the State of Iowa, \$42,813 from the city of Cedar Rapids in 1991; \$768,287 from the State of Iowa, and \$365,813 from the city of Cedar Rapids in 1992; \$858,113 from the State of Iowa, and \$170,000 from the city of Cedar Rapids in 1993; \$841,689 from the State of Iowa, and \$36,000 from the City of Cedar Rapids in 1994; and \$1,016,505 from the State of Iowa, and \$36,000 from the city of Cedar Rapids in 1995.

Research is being conducted at Iowa State University and the University of Iowa, in collaboration with the City of Cedar Rapids. The Consortium has reviewed its progress to date and has indicated that the overall objectives of its

work plan will not be completed within fiscal years 1996 and 1997.

JOINTED GOATGRASS

Research is being conducted on control systems for jointed goatgrass in wheat production including integrated cultural management, seed bank studies, and modeling for management conducted as sub-projects by several states. The premier research project continues to be an "Integrated Management" study being conducted across states in the midwest and west. In this study, jointed goatgrass management is being evaluated based on planting dates, planting density, economic thresholds, and competitive varieties. Research is also being conducted on crop rotations, biological control, seed production and spread, and the development of computer-based decision aids. All funded work has a technology transfer plan and a national coordinator for technology transfer to insure that growers are fully informed about all options for managing this devastating weed. The National Technology Transfer Coordinator has been hired, with the concurrence of a steering committee, and that person is housed at the University of Nebraska. To maximize cooperation among scientists, an annual meeting is held among all investigators and the national steering committee to strengthen collaborations and optimize the distribution of limited funds.

The principal researcher believes jointed goatgrass infests nearly five million acres of winter wheat in the west and midwest and is spreading unchecked. It costs U.S. wheat growers an estimated \$145 million annually. Control of jointed goatgrass in wheat is impossible with current methods because its seed survives in the soil for five or more years. Jointed goatgrass has increased rapidly in the past 20 years because of the widespread adoption of conservation tillage systems. Jointed goatgrass proliferated in such reduced tillage systems, and it seriously impedes the universal adoption of such practices. The research is addressing a national need and is involving scientists from other states.

The goal of this project is to reduce the devastating effect of jointed goatgrass on wheat production and quality and to prevent its continued spread into new, non-infested areas. A jointed goatgrass population model has been constructed including a post-harvest (fall) seed bank, spring seed bank, and fall and spring germination, seeding mortality, mature plants and seed production. The underlying jointed goatgrass population model has been constructed with a vision that the weed management strategies are going to be long-term in nature and be focused on the impact of crop rotation, tillage and weather on jointed goatgrass population dynamics.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$329,000, and for fiscal years 1995-1996, \$296,000, each year. A total of \$921,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: for 1994, \$82,198 state appropriations, \$82,256 from industry and \$14,871 miscellaneous for and for fiscal year 1995, \$67,442 state appropriations, \$38,496 from industry and \$13,304 miscellaneous for fiscal year 1995.

Coordinated and cooperative research is being conducted by University and USDA/Agricultural Research Service scientists in the states with serious infestations including Washington - the principal coordinating institution - , Colorado, Kansas, Nebraska, Oklahoma, Utah, Oregon, Idaho, Montana, Wyoming, and South Dakota. The university researchers anticipate that the work may be completed in fiscal year 1999.

LANDSCAPING FOR WATER QUALITY, GEORGIA

The principal researcher believes that due to economics of scale, there has been a rapid intensification of animal-based agriculture of modern confinement-based livestock feeding and production facilities across the United States. Because of the soil, topography, and climatic conditions typical to such regions as the eastern coastal and Appalachian mountain states, an inadequate cropland base exists in these areas that is suitable for the proper use of manure from these animal confinement facilities. Therefore, problems of regional water quality degradation are resulting from the excessive discharge of nutrients, organic matter, and pathogens to receiving waters. This research is badly needed to create the information base needed to develop landscape-scale land management strategies to integrate these modern animal production facilities with modern row-cropping practices to provide substantial net benefits to sustainable, environmentally-friendly agricultural systems.

The original goal of this research was to develop a comprehensive, multidisciplinary five-phase, five-year study to develop guidelines for the management of animal-based agriculture based on landscape-scale environmental quality considerations.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 is \$300,000. Information provided by the University indicates that in excess of \$202,000 in state funds will be provided to support this grant in fiscal year 1996.

Research on this topic will be conducted by an interdisciplinary team of scientists at the National Environmentally Sound Production Agriculture Laboratory at the University of Georgia in collaboration with scientists from the Department of Agriculture's Agricultural Research Service, Natural Resources Conservation Service, Cooperative State Research, Education, and Extension Service, and state extension services and local farmers and citizens.

This is a long-term study to develop guidelines for the management of animal-based agriculture on a landscape-scale that is both economically and environmentally sustainable for states with soils, climatic, and agricultural, similar to the Southeastern United States and the Appalachian mountain states. The first five-year phase being initiated in fiscal year 1996 is scheduled to be completed in fiscal year 1998.

LOWBUSH BLUEBERRY RESEARCH, MAINE

Interdisciplinary research is being conducted on many aspects of lowbush blueberry culture and processing includes investigation into factors affecting processing quality, biological control of insect pests, sustainable pollination, weed, disease and fertility management, cold hardiness and ground water protection. The principal researcher believes Maine produces 99 percent of all lowbush blueberries or 33 percent of all blueberries, including highbush, in the United States. Although this work is of major local interest, it is also of national importance because of the quantity of blueberries contributed. This work helps maintain the continued availability and quality of this native fruit commodity.

The original research goal was to provide research answers to unique lowbush blueberry production, pest and processing problems. Research to date indicates that the field sanitizer was able to use heat to control insect pests without adversely affecting plant growth, providing a non-chemical alternative to pest management. Eumenid wasps were found to control red striped fireworm, providing a potential biological control. Native leafcutter bees and alfalfa leafcutter bees were found to increase lowbush blueberry fruit set and yield, providing an alternative to imported honeybees. Clonal variation was found to affect stem and flower bud hardiness that will prove to be important in clonal selection for planting. Propiconazole at 4 oz/a was as effective as triforine at 24 oz/a to control monolina disease, thereby reducing the chemical needed for control of this disease. Boron and calcium were found to have more influence on the ability of the stigma to stimulate pollen germination than the germinability of the pollen grains themselves. A new mechanical harvester had yields and fruit quality comparable to hand harvest, providing growers with a more efficient tool to harvest blueberries. Economic weed thresholds have been determined for two weed species, thereby giving growers a method to determine when to use control measures. Mowing proved as effective as wiping to suppress these species, providing a non-chemical control alternative. A rope wick wiper effectively controls weeds growing above blueberry plants without crop injury. Pesticide residues in lowbush blueberries were found to be well below federal tolerances. Carboxymethyl cellulose and various gums were found to control berry leakage, thereby improving quality for use in baked products. Products for use in food industry are being extracted from cull berries, thereby improving utilization and reducing waste.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$170,000; fiscal year 1991, \$202,000; fiscal years 1992 and 1993, \$185,000 per year; fiscal year 1994, \$208,000; and fiscal years 1995-1996, \$220,000 each year. A total of \$1,390,000 has been appropriated. Proposed direct industry support from blueberry tax funds for 1996 is \$65,613.

Research is being conducted at the University of Maine. The University researchers request that the Special Research Grant to be continued through the current five year research program cycle from 1996 through 2001.

LIVESTOCK AND DAIRY POLICY, NEW YORK AND TEXAS

The purpose of this grant is to assess the possible economic impacts on the U.S. livestock, poultry, and dairy sectors from various macroeconomic, farm, environmental, and trade policies and new technologies. Both Cornell University and Texas A&M University conduct analyses of these policies and disseminate the information to policymakers, farmers, and agribusinessmen. Cornell focuses on dairy policies, and Texas A&M focuses on policies affecting livestock and poultry. The principal researcher believes information on the implications of new and alternative farm, trade, and macroeconomic policies affecting the livestock and dairy sectors is of special interest to policy-making officials, farmers, and others. Such information enables farmers and agribusinessmen to make necessary adjustments to their operations to enhance profitability and for public officials to consider alternatives to sustain adequate supplies and minimize public program costs.

The original goal was to establish a specialized research program that could provide timely and comprehensive analyses of numerous policy and technological changes affecting livestock and dairy farmers and agribusinessmen and advise them and policymakers promptly of possible outcomes. The capability to achieve this goal has been achieved. This program continues to provide timely assessments and evaluations of provisions and proposed changes in agricultural policies, the General Agreement on Tariffs and Trade, and the North American Free Trade Agreement; various income and excise tax measures; alternative pricing measures for milk; a target price/income support program for wool; and technological innovations such as the bovine and porcine growth hormone. Both institutions maintain extensive outreach programs to disseminate results throughout the United States. The program has updated its analytical capability and conducted more than two dozen analyses of policy options for the 1995-1996 farm bill deliberations.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$450,000; fiscal year 1990, \$518,000; fiscal years 1991-1993, \$525,000 per year; fiscal year 1994, \$494,000; and fiscal years 1995-1996, \$445,000 each year. A total of \$3,927,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$37,420 State appropriations in 1991; \$162,086 State appropriations and \$133,278 product sales for a total of \$295,364 in 1992; and \$301,817 State appropriations, \$1,412 industry, and \$7,121 miscellaneous for a total of \$310,350 in 1993; \$24,702 State appropriations, and \$5,961 industry for a total of \$30,663 in 1994; \$235,526 State appropriations for 1995; and approximately \$250,000 in State appropriations for 1996.

The research is being conducted at Cornell University and Texas A&M University. The principal researchers indicate that this program is of a continuing nature for the purpose of assessing existing issues and proposed policy changes affecting the livestock and dairy industries.

MAPLE RESEARCH, VERMONT

Maple research focusses on sugar maple trees and the basic mechanism of maple sap exudation which enables the maple industry to collect maple sugar from trees in order to make maple syrup and related maple food products. Maple products are an important source of seasonal income in maple-growing areas of rural America. Initial efforts concentrated on effects of insufficient water for good tree health, with the goal of learning how water moves from the soil into and through the tree, affecting tree growth and sap production. Maple trees in Vermont and the Northeast exhibited symptoms of decline. The relationship of this decline to acid precipitation was investigated. A large fertilizer experiment was established to determine the effectiveness of various fertilizer combinations in improving the health of declining maple trees. During the past year, the source of lead in finished maple products was identified as being due to processing during the evaporation stage. Consequently, the single focus this year is on identifying specific sources of lead contamination, and identifying and testing lead-free equipment. It will also address commercial methods for removing lead from maple syrup. The fiscal year 1996 grant supports research through June 1997. The principal researcher believes the decline and dieback of maple trees in the Northeast has been a major concern of the maple industry for several years. The causes of decline and dieback need to be understood and management practices developed to counteract these problems. The FY96 program concentrates on two aspects of the lead problem: Identifying the source of contamination during processing and identifying commercial methods to remove lead from products.

The goal of this research is to conduct research on maple tree physiology, management of sugar maple stands, and related aspects of the maple industry to benefit the maple industry in Vermont and the Northeast. Much has been learned regarding tree physiology in response of maple trees to varying soil moisture and other environmental conditions. Recently, studies of photosynthesis rates in relation to leaf nitrogen were found to be strongly positive, and the relation to leaf calcium and magnesium contents were less positive. Now that lead in maple products has been identified as a major potential concern, the focus of the project has shifted to this concern.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$100,000; fiscal years 1986-1987, \$95,000 per year; fiscal years 1988-1989, \$100,000 per year; fiscal years 1990-1993, \$99,000 per year; fiscal year 1994, \$93,000; and fiscal years 1995-1996, \$84,000 each year. A total of \$1,147,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follow: \$52,220 state appropriations and \$10,345 product sales in 1991; \$49,450 state appropriations and \$18,950 product sales in 1992; \$49,575 state appropriation and \$23,860 product sales in 1993; \$44,543 state appropriation, \$29,321 product sales, and \$25,000 local support in 1994; and \$60,856 state appropriation, \$12,000 product sales, and \$19,090 local support in 1995. For fiscal year 1996, it is estimated that product sales will provide \$15,000 and state appropriations \$83,000.

This research is being conducted at the Vermont Agricultural Experiment Station. Research planned for fiscal year 1996 has focussed on the problem of lead found in maple syrup. It is anticipated that this work may be completed in 1997. The work relating to the sap exudation mechanism, which has temporarily been placed on hold in order to address the lead problem, is a longer-term project which will not be completed until 1999.

MICHIGAN BIOTECHNOLOGY INSTITUTE

The objective of the Michigan Biotechnology Institute's research program is to develop bioprocessing technology to manufacture products from agricultural raw materials, to increase the utilization of raw materials, reduce surpluses, and to degrade agricultural and associated wastes, thereby decreasing environmental costs of agricultural products and processes. Bioprocessing may include fermentation, an enzymatic step, chemical catalysis, or physical modification of agricultural raw materials. The principal researcher believes the results from the research to develop bioprocessing technology to manufacture products from agricultural raw materials, which increases their utilization, reduces agricultural commodity surpluses, and environmental costs will contribute to regional and national priorities.

The original goal of this research remains to provide a return on the investment by choosing market-viable technologies developed through new companies, new jobs, and additional tax revenues produced for state, local, and Federal governments. The Michigan Biotechnology Institute and Michigan State University have succeeded in developing numerous technologies that are now in the marketplace. Examples include the following: A process was developed to produce lactic acid through fermentation using corn as the feedstock resulting in a polymer for biodegrading plastics. The properties of this polymer make it useful for non-woven applications such as medical packaging, clear blister bags, diapers, etc; Corn was used as a feedstock to develop plant growth formulations to enhance plant growth and productivity through reduced nitrogen fertilizer requirements. Growth promoters for high volume or high value crops have the potential for saving billions of dollars annually; Biodegradable plastic resins made from cornstarch were made to produce compostable films for agricultural mulch and other soluble films, and for cellulase-base engineered thermoplastic resins. Biodegradable plastic resins from cornstarch were also developed for moldable products such as disposable cutlery, plastic containers, toys and toothbrushes. The market for resins for use in formulation and extrusion of plastics for all applications is in excess of \$2 billion annually; Corn was also used for the development of all-natural flavors and derivatives including a salty flavor that can be produced to taste in non-sodium and non-potassium forms and for low-cost, readily-available carbohydrates resulting in high-quality, high-value optically-pure chiral intermediates for the pharmaceutical and agrochemical industries; A sand/manure separation system for dairy farmers was developed to cost-effectively separate manure from sand and recycle both components. Many of these products are being explored for commercial development through licensing agreements with industrial partners. In addition, there are many agri-based industrial products under development including: several succinate-based green chemicals for

surfactants and detergents, new food ingredients and flavors, biological fertilizers, paint removers, adhesives, printing inks, magnetic tapes, lubricants, food flavorings, and resins and plastics; green solvents for fermentation of corn-derived materials and ethanol produced from cellulose; food ingredients for food preservatives, improved enzymes for processing starch and fructose production, food flavors and pigments, feed ingredients to improve digestibility of forage-based animal feeds and development of biomass-based animal feeds; and agricultural waste treatment processes to improve methods to clean up herbicides and pesticides.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$1,750,000; fiscal year 1990, \$2,160,000; fiscal year 1991, \$2,246,000; fiscal years 1992-1994, \$2,358,000 per year; fiscal year 1994, \$2,217,000; fiscal year 1995, \$1,995,000; and fiscal year 1996, \$750,000. A total of \$18,192,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$1,750,000 in State of Michigan appropriations, \$160,000 from industry, and \$1,000,000 from miscellaneous in 1991; \$1,750,000 in State of Michigan appropriations, \$175,000 from industry, and \$1,000,000 in miscellaneous in 1992; \$1,750,000 in State of Michigan appropriations and \$100,000 from industry in 1993; \$1,750,000 in State of Michigan appropriations, \$175,000 from industry, and \$100,000 miscellaneous in 1994; and \$200,000 in State of Michigan appropriations and \$2,035,000 from industry in 1995.

The research is being conducted on the campus of Michigan State University and at the Michigan Biotechnology Institute. The Institute has reported specific milestones that they intend to accomplish within the five-year period ending in fiscal year 1998. The Michigan Biotechnology Institute has kept to that timetable and it's anticipated that they will be able to complete the work on schedule if funding is provided for the duration of the planned project.

MIDWEST ADVANCED FOOD MANUFACTURING ALLIANCE, NEBRASKA

The stated purpose of the Midwest Advanced Food Manufacturing Alliance is to expedite the development of new manufacturing and processing technologies for food and related products derived from United States-produced crops and livestock. The Alliance is being formed between research scientists in food science and technology, food engineering, nutrition, microbiology, computer science, and other relevant areas from 12 leading Midwestern universities and private sector researchers from numerous U.S. food processing companies. Specific research projects are awarded on a competitive basis to university scientists with matching funds from non-federal sources for research involving the processing, packaging, storage, and transportation of food products. The principal researcher believes the food manufacturing industry is the number one manufacturing industry in the United States. Opportunities for trade in high value processed food products will grow exponentially on a worldwide basis.

The goal was to expedite the development of new manufacturing and processing technologies for food and related products derived from United States-produced crops and livestock. This is to be accomplished by conducting a research proposal competition among faculty from the 12 participating universities to fund research projects where matching funds are available from industry. Fourteen projects were funded from fiscal year 1994 funds with anticipated completion by March 1996. Nine projects were funded from fiscal year 1995 funds with anticipated completion in December 1996. Proposals are reviewed by a group of independent scientists to critique the quality of the science and the relevance to the food industry.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$470,000, and for fiscal years 1995-1996, \$423,000 each year. A total of \$1,316,000 has been appropriated. Industry matching funds were \$823,148 in fiscal year 1994 and \$414,164 in fiscal year 1995.

The work is being coordinated by the Nebraska Agricultural Experiment Station at Lincoln. Specific research projects are also being conducted at ten other universities that are part of the Alliance. The research projects selected for first year funding should be completed by March 1996. Projects awarded under the second year of funding will be initiated on January 2, 1996. The completion date for the second year of the project is December 31, 1996. A third year competition should be initiated in the spring of 1996.

MIDWEST AGRICULTURAL PRODUCTS, IOWA

The Midwest Agribusiness Trade and Information Center (MATRIC) does applied research to improve the global competitiveness and marketability of agricultural products produced in the Midwest and disseminate the results to small and medium-sized agribusinesses. Projects include analyses of potential markets for U.S. agricultural products and equipment/technology in several countries; attitudes of foreign consumers; and development of new/improved U.S. products to meet foreign needs. The principal researcher believes there is a need by small- and medium-sized agribusiness firms in the Midwest region for trade expansion and market research to enable those firms to comprehend the complexities of global markets and to produce and market their products effectively in an increasingly competitive international marketplace.

The goal is to enhance the export of agricultural commodities, value-added products, and equipment produced by Midwestern agribusiness firms through research and education programs utilizing a close-working relationships with those firms. Recent results include the following. After a major effort to explore the market potential for soy products in Pacific Rim countries, MATRIC sponsored a workshop in March 1995 for producers, traders, and processors. Participants were very pleased and requested another conference on additional soy topics. Taste panels conducted in Mexico have resulted in understanding the needs of pork consumers. Case studies of outstanding export firms have been published.

Market assessment studies of Latin America, China, Russia, Africa, and the Baltic States are ongoing. Country and foreign business profile studies are being undertaken to improve the development of trade relationships between firms in those countries and Midwestern firms. Market information is compiled and made available to Midwestern agribusiness firms by electronic media, workshops, and publications. Similar information about Midwestern firms is made available to overseas counterparts.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992-1993 was \$700,000 per year; fiscal year 1994, \$658,000; and fiscal years 1995-1996, \$592,000 per year. A total of \$3,242,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$185,495 State appropriations and \$373,897 industry for a total of \$559,392 in 1992; \$183,192 State appropriations and \$318,966 industry for a total of \$502,158 in 1993; \$127,948 State appropriations and \$500,394 industry for a total of \$628,342 in 1994; \$258,053 State appropriations and \$389,834 industry for a total of \$647,887 for 1995; \$165,425 State appropriations and unreported industry funds in 1996.

The program is carried out by Iowa State University. This current phase of the program will be completed in 1998.

MILK SAFETY, PENNSYLVANIA

The overall goal of the Milk Safety Program is to provide insights into factors that help ensure an adequate and safe milk supply. Toward that end, the research has focused on techniques and management practices which affect the safety of the milk during its production, processing, manufacturing and marketing. Special attention has been given to ways of preventing contamination and growth and/or destroying pathogens that enter the milk supply. The principal researcher believes mastitis is the most economically important disease of adult dairy cattle, costing the nation's dairy producers approximately \$2 billion annually in lost profits. Effective mastitis control would increase the profitability of the dairy enterprise, while providing consumers with a higher quality product free of antibiotics and potentially disease-causing bacteria. In addition, several large outbreaks of staphylococcal food poisoning, which is responsible for an estimated 30 percent of the total foodborne illness in the United States, have involved dairy products such as milk, non-fat dry milk, cheese, butter, and cream. Third, *Listeria monocytogenes*, another bacterial pathogen that has been associated with illness in dairy products, is present in about 4 percent of raw milk, thus making pasteurization critical. A need exists to develop a predictive model so that producers and processors can determine the risk level associated with post-pasteurization storage of fluid milk under refrigerated conditions. Finally, improved understanding of safe handling requirements for infant formula needs to be communicated to physicians as well as consumers. On a regional basis Pennsylvania is the fourth largest dairy state in the nation, with dairy products accounting for over 40 percent of total cash receipts from agricultural products.

Thus, ensuring safety of dairy products impacts not only consumer health but economic viability as well.

The research is aimed at minimizing or eliminating future foodborne disease outbreaks from milk and dairy products. A key accomplishment includes the discovery of potential approaches of enhancing natural defense mechanisms of the bovine mammary gland through vaccination and immunoregulation. Discoveries of factors influencing growth of Staphylococcus aureus could be used to prevent or contain growth of this pathogen in foods. A computer model of Listeria monocytogenes growth in dairy foods under dynamic refrigeration conditions and during extended storage is under development to provide producers and processors with a proven technology for further enhancing the safety of fluid milk and related products. Another notable accomplishment is that the American Association of Pediatricians have consulted with the principal investigators of one project funded under this grant with regard to revising their handbook on nutrition and food safety issues concerning the safe handling of infant formula.

Grants have been awarded for milk consumption and milk safety from funds appropriated as follows: fiscal years 1986 through 1989, \$285,000 per year; fiscal year 1990, \$281,000; fiscal year 1991, \$283,000; fiscal year 1992, \$284,000; fiscal year 1993, \$184,000; fiscal years 1994-1996, \$268,000 per year. A total of \$2,976,000 has been appropriated for milk safety and milk consumption.

The University estimates that non-federal funds contributed to this project include the following costs and salaries: \$265,000 for fiscal year 1991; \$224,700 for fiscal year 1992; \$142,600 for fiscal year 1993; no data are currently available for fiscal year 1994; and \$252,168 for fiscal year 1995.

The research is being conducted at the Pennsylvania State University. The researchers anticipate that research supported by this grant should be concluded in 1998.

MINOR USE ANIMAL DRUGS

The National Agricultural Program to Approve Animal Drugs for Minor Species and Uses--NRSP-7--was established to obtain Food and Drug Administration--FDA--clearance of animal drugs intended for use in minor species and for minor uses in major species. The funds for the special research grant are divided between the four regional animal drug coordinators and the headquarters at Michigan State University for support of the drug clearance program. The NRSP-7 funds are being utilized by the regional animal drug coordinators and by allocations to State Agricultural Experiment Stations to develop data required for meeting clearance requirements. Participants in the research program consist of the regional coordinators, State Agricultural Experiment Stations, USDA--Agricultural Research Service--ARS--, the U. S. Department of Interior--USDI--, schools of veterinary medicine, and the drug industry. Each year priorities are established for the various species categories including small ruminants, game birds, fur-bearing animals, and aquaculture species.

The principal researcher believes animal agriculture throughout the U.S. has relied on chemical and pharmaceutical companies to provide their industry with safe efficacious drugs to combat diseases. The need for FDA, Center of Veterinary Medicine--FDA/CVM--approved drugs to control diseases in minor species and for minor uses in major species has increased with intensified production units and consumer demand for residue-free meat and animal products. The high cost incurred to obtain data required by Federal, regional, and local regulations to approve these drugs, when coupled with limited economic returns, has limited the availability of approved drugs for minor uses and minor species. The program provides research needed to develop and ultimately culminate in drug approval by FDA/CVM for the above purposes. The goals are accomplished through the use of regional animal drug coordinators as well as a national coordinator to prioritize the need, secure investigators at Federal, state and private institutions, and oversee the research and data compilation necessary to meet Federal regulations for approval. All drug approvals are national, although industry use may be regional. For example aquaculture is concentrated in specific geographic sections of the country. The principal researchers believe this research to be of national, regional or local need.

The original NRSP-7 goal to obtain FDA clearance of animal drugs intended for use in minor species and for minor uses in major species remains as the dominant goal. In recent years, the research program has expanded or given additional emphasis to aquaculture species, veal calves and sheep. In addition, several new animal drug requests from the game bird industry are expected during the next year. The importance of environmental assessment, residue withdrawals, and occupational safety have increasingly been given more attention during the approval process to help assure consumer protection. To date, 267 drug requests have been submitted to the Minor Use Animal Drug Program for clearance. Working in conjunction with many universities, the USDI, Agricultural Research Service, and numerous pharmaceutical companies, 28 research projects are now active and will be continued through 1996 to establish data for clearances. Twenty public master files, which involve 10 animal species, have been published in the Federal Register providing clearance for drug use in minor species. Three additional public master files are currently being reviewed.

The Center for Veterinary Medicine of the Food and Drug Administration is cooperating and supporting this program to the fullest extent. The program is a prime example of Federal interagency cooperation in coordination with academic institutions, pharmaceutical industries and commodity interests to effectively meet an urgent need.

Grants have been awarded from appropriated funds in the amount of \$240,000 per year for fiscal years 1982-1985; \$229,000 per year for fiscal years 1986-1989; \$226,000 for fiscal year 1990; \$450,000 for fiscal year 1991; \$464,000 per year for fiscal years 1992 and 1993; \$611,000 for fiscal year 1994; and \$550,000 per year for fiscal years 1995-1996. A total of \$5,191,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$156,099 state appropriations, \$29,409 industry, and \$11,365 miscellaneous in 1991; \$265,523 state appropriations, \$1,182 product sales, \$10,805 industry, and \$59 miscellaneous in 1992; \$212,004 state appropriations, \$315 industry, and \$103 miscellaneous in 1993; \$157,690 state appropriations and \$7,103 miscellaneous in 1994; and \$84,359 state appropriations in 1995.

The grants have been awarded to the four regional animal drug coordinators located at Cornell University, the University of Florida, Michigan State University and the University of California-Davis, and to program Headquarters at Michigan State University. Research is conducted at these universities and through allocation of these funds for specific experiments at the State Agricultural Experiment Stations, the Agricultural Research Service, USDI, and in conjunction with several pharmaceutical companies. Selected categories of the Special Research Grants program address important national/regional research initiatives. Research projects for this program have involved 20 different animal and aquaculture species with emphasis given in recent years to research on drugs for the expanding aquaculture industry and increasing number of requests from the sheep, veal calf, and game bird industries. The minor use animal drugs program involves research on biological systems that by their nature are ever changing and presenting new challenges to agriculture. Especially with the new sensitivities about safety and the environment, there is a high priority for continuation of these ongoing projects.

MOLLUSCAN SHELLFISH, OREGON

The research under this program was initiated in fiscal year 1995. A repository for the conservation of genetic material of molluscan shellfish would be established during the first year of the project. This repository would serve as a source of genetic material for future breeding programs aimed at commercial production of shellfish with desirable traits. The researchers indicate that there is a national need for a molluscan broodstock development program to benefit the commercial industry through conservation, genetic manipulation and wise management of the genetic resources of molluscan shellfish.

The goals of this research program are to establish a repository for genetic materials of molluscan shellfish, to establish breeding programs for commercial production of molluscan shellfish, and to establish a resource center for the industry, researchers and other interested parties in the U.S. and abroad.

In fiscal year 1995 the appropriation was \$250,000; and fiscal year 1996 is \$300,000. The university estimates a total of \$135,454 of non-federal funding in fiscal year 1995 primarily from state sources.

Research will be conducted at Oregon State University, Rutgers University, and the University of California at Davis. The researchers anticipate that work may be completed in fiscal year 1999.

MULTI-COMMODITY RESEARCH, OREGON

The purpose of the program is to provide agricultural marketing research and analysis to support producers and agribusiness in penetrating new and expanding markets for value-added products. The program examines the potential for increasing the competitiveness and economic value added of Pacific Northwest agriculture through improvements in food production, processing, and trade by assisting decision makers in developing economic and business strategies. The principal researcher believes Oregon and the other States in the Pacific Northwest region produce a wide variety of agricultural commodities and products with considerable potential for export to Pacific Rim countries. Research and analysis will assist regional agricultural producers and processors in assessing these markets and developing market strategies and value-added products tailored to specific Asian markets.

The goal is to support a research program on the marketing of wheat and other commodities produced in Oregon and other Pacific Northwest States. Objectives are to develop an agricultural growth model to assess Oregon's farm and value-added market potential for products, conduct applied research on Oregon's global competitiveness and policy implications, reassess measures used to estimate the performance of Oregon's agricultural industry, facilitate applied research into value-added agricultural trade, and assess need and implementation of interdisciplinary research with other universities to develop products and international markets. Action plans and projects have been developed to fulfill the objectives and are being implemented along 5 research components: Economic Characteristics of Pacific Economies; Technological Issues and Opportunities in Food Packaging and Sensory Analysis; Food Innovation Research; Applied Studies of Pacific Northwest Value-Added Agricultural Industries; and Strategic Planning for the Oregon Food Processing Industry. Consistent with the research components, specific research activities are currently targeted. They are the Pacific Economies Data Base; Food Demand Patterns Over Changing Levels of Economic Development in Pacific Economies; Technological Issues and Opportunities in Food Packaging; Food Innovation Research; Applied Studies of Pacific Northwest Value-Added Agricultural Industries; and Competitive Strategies for the Oregon Food Processing Industry.

The research began in fiscal year 1993 with an appropriation of \$300,000. The fiscal year 1994 appropriation was \$282,000, and fiscal years 1995 and 1996 appropriations are \$364,000 for each year. The total amount appropriated is \$1,310,000.

The non-federal funding provided for this grant was \$168,824 State appropriations in 1992; \$177,574 State appropriations in 1993; and \$162,394 State appropriations in 1994. The university has not reported the amount of non-federal funds appropriated for fiscal year 1995 or 1996.

The research program will be carried out at Oregon State University in Corvallis and at the Agricultural Marketing and Trade Program in Portland, Oregon. The long-range research plan extends through September 30, 1998.

MULTI-CROPPING STRATEGIES FOR AQUACULTURE, HAWAII

In fiscal year 1993, the university redirected this research program to address the opportunities of aquaculture production in the ancient Hawaiian fish ponds. The university has developed a community based research identification process and has developed specific research projects to be included in this program. Current research includes work in the area of edible seaweed cultivation and the culture of *moi*, a species indigenous to Hawaii. Previous research under this program led to the development of co-production of shrimp and oysters in aquacultural systems. The technology developed from this program has been commercialized. The researchers indicate that the primary need for this research is to assist the native Hawaiians in improving the profitability and sustainability of the ancient Hawaiian fish ponds as part of a total community development program.

The original goal of this program was to develop technology for the co-production of shrimp and oysters in aquacultural production systems. Research led to the development of oyster production systems that have been field tested under commercial conditions. The current research effort is aimed at developing sustainable commercial aquaculture production systems on the island of Molokai. Research has been initiated to develop hatchery techniques for two native species of edible aquatic plants. Additionally, research has been initiated on the development of hatchery and rearing technologies for a native finfish species in Hawaii.

This research was initiated in fiscal year 1987 and \$152,000 per year was appropriated in fiscal years 1987 through 1989. The fiscal year 1990-1993 appropriations were \$150,000 per year; \$141,000 in fiscal year 1994; and \$127,000 in fiscal years 1995-1996, each year. A total of \$1,451,000 has been appropriated.

The university reports a total of \$137,286 of non-federal funding for this program in fiscal years 1991-1994 and \$318,468 in fiscal year 1995. The primary source of non-federal funding was from state sources.

Research is being conducted at the University of Hawaii. The university has indicated that the new research program would be completed in fiscal year 1997.

NATIONAL BIOLOGICAL IMPACT ASSESSMENT PROGRAM

The National Biological Impact Assessment Program was established to facilitate and assess the safe application of new technologies for the genetic modification of animals, plants and micro-organisms to benefit agriculture and the environment. This program was established in fiscal year 1989. The principal researcher believes that during the last decade there has been an explosion of new information produced by rapid advances in biotechnology and its beneficial application to agriculture and the environment. The principal investigators believe this program fulfills an important national need to provide scientists easy access to relevant information that will facilitate the preparation of scientific proposals that

comply with the oversight and regulatory requirements for testing potential biotechnology products and foster the safe application of biotechnology to benefit agriculture and the environment. This program supports the agricultural and environmental biotechnology community by providing useful information resources to scientists, administrators, regulators, teachers and the interested public.

The original goal of the National Biological Impact Assessment Program remains to provide easy access to reliable information on public health and environmental safety of agricultural biotechnology research. Its objectives were to increase the availability, timeliness and utility of relevant information to the biotechnology research community; facilitate the compliance of biotechnology research with oversight and regulatory requirements for testing biotechnology products; and provide informational resources to the scientific community that would foster the safe application of biotechnology to agriculture and the environment. Each year much new information is added and integrated into the computerized database. The system has evolved to adapt to new computer technologies and is now available via internet and the World Wide Web. This computer-based information system now includes texts of federal agency biotechnology regulations, proposed rules and policy statements; databases of biotech companies, and research centers, institutional biosafety committees and state regulatory contacts; resource lists of publications, directories, bibliographies and meetings; monthly newsletters developed and distributed by this program; relevant Federal Register announcements; and links to other electronic information resources. In addition, this program provides biosafety training through workshops for academic and corporate scientists, biosafety officers and state regulators. A Field Test Notebook has been developed as a reference text for these workshops.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$125,000; fiscal year 1990, \$123,000; fiscal years 1991-1993, \$300,000 per year; fiscal year 1994, \$282,000; and fiscal years 1995-1996, \$254,000 per year. A total of \$1,938,000 has been appropriated.

The co-principal investigator of this grant is Head of the Department of Biochemistry and Anaerobic Microbiology at Virginia Polytechnic Institute and State University. The university contributes his time to administer this grant which amounts to approximately \$5,000 each year.

This grant award is with Virginia Polytechnic Institute and State University. Former and current partners in the program include The Pennsylvania State University, Louisiana State University, North Carolina Biotechnology Center, University of Arizona, University of Missouri, Michigan State University, Purdue University, and the National Agricultural Library.

There remains a continuing need to address the safety of field testing of genetically modified organisms to benefit agriculture and the environment. This continues to be a rapidly expanding field. Increasing amounts of new information needs to be properly integrated into the computerized information system each year. This program has been very successful in providing essential information on

the conduct of safe field experiments. Thus, the program remains a high priority and needs to be continued.

NEMATODE RESISTANCE GENETIC ENGINEERING, NEW MEXICO

This research project is exploring alternatives to pesticides. The overall intent of the project is to decrease or eliminate the current reliance on soil-applied pesticides which are now or are likely to become significant contaminants of ground water. Work in 1995 involved use of molecular biological techniques to incorporate resistance to nematodes into agronomically important plants. Several naturally-occurring potential nematicides, such as bacterial toxins, were tested in combination with various gene regulators. Work continued on the transformation of pest-resistant crop plants. The principal researcher believes the Nematode Resistance Genetic Engineering Project is designed to provide environmentally sound, state-of-the art techniques for combating nematode infestations of agronomically valuable crops plants in the southwest and other regions of the U.S. There is the potential for both regional and national application.

The original goal of this project remains to provide an alternative approach for the control of plant parasitic nematodes through the use of molecular biological techniques for the transfer of nematocidal resistance capacities directly to plants. The basic efforts involved development of a technique for rapid synthesis of double-stranded DNA in a single reaction, paving the way for construction of synthetic genes. A nematode-stimulated promoter element was engineered for insertion in front of a bacterial toxin gene. Insect intestinal membrane vesicles were isolated and partially purified as tools for the detection of specific protein binding domains. This work should lead to acceleration of absorption of biologically active compounds and selected enzymes by nematode and insect pests, in the development of new, improved pest management technologies. Applied work involved completion of preliminary field trials of insect-resistant potatoes.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal years 1991-1993 was \$150,000 per year; \$141,000 in fiscal year 1994; and \$127,000 in fiscal years 1995-1996, each year. A total of \$845,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$65,000 state appropriations in 1991; \$65,000 state appropriations in 1992; \$75,000 in state appropriations in 1993; \$75,000 in state appropriations in 1994; and \$75,000 in state appropriations estimated for 1995. For 1996, the University and the Plant Genetic Engineering Lab are providing matching contributions in faculty and staff salaries, facilities, equipment maintenance and replacement, and administrative support.

Research is being conducted at the New Mexico State University, and at collaborating universities in the region. The New Mexico scientists now indicate that, at the current levels of USDA and University support, the objectives will be completed by fiscal year 2001.

NEW METHODS OF WEED CONTROL, NORTH DAKOTA

The project is designed to reduce the environmental pollution caused by the extensive usage of herbicides for weed control and provide growers with environmentally safe weed control systems. The present project addresses three areas; one being crop production practices, second, weed biology and herbicide resistance, and third, efficient herbicide usage. In crop production practices, systems experiments have been established at three locations that include crop rotation, tillage, seeding method and timing; these variables are incorporated into sustainable, reduced tillage and conventional systems. Results being monitored include the effect of weed control intensity on long-term weed infestations and economic returns. The emphasis in weed biology research is with kochia, wild oat, and green foxtail that are herbicide-resistant. In efficient herbicide usage, several factors are being studied such as application methods to improve weed retention of herbicides and weed-detecting sprayers to treat only areas where weeds are present. The principal researcher believes the research addresses new methods to control weeds using systems control with multi-year, multi-crop rotations, reduced pesticide applications, that better simulate a typical on-farm sequence than short-term grants. Some variables included in the research are reduced pesticide applications and techniques to enhance herbicide efficacy.

The original goal was to develop new, efficient weed control methods. To accomplish this, long-term field experiments have been initiated to obtain basic crop-weed biology and production system information. The first three years of the rotation experiments have been completed in 1993 through 1995. Changes in weed populations were beginning to occur in 1995 and the environmental conditions were atypically wet during these three years; these observations support the need to complete at least two cycles of the rotation for a total of at least eight years to obtain reliable scientific information. The improved efficiency of weed control method has developed adjuvants to overcome the antagonism of salts, which naturally occur in water and reduce the efficacy of some herbicides. Another approach is the use of wetting agents to reduce the herbicide rate required and/or to improve their performance consistency. Kochia genetic lines have been developed that are homozygous for resistance to various studies to determine inheritance and possible spread of herbicide resistance. Fields are being monitored for the development of kochia resistance to dicamba. A better understanding of how herbicide-resistant weeds occur in a population should be useful to developing methods to prevent herbicide resistance from becoming an unmanageable problem.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$500,000 per year; \$470,000 in fiscal year 1994; and \$423,000 in both fiscal years 1995 and 1996. A total of \$2,316,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows. no matching in 1991; \$27,030 state appropriations in 1992, \$48,472 state appropriations in 1993, \$41,969 state appropriations in 1994, and \$71,847 state appropriations in 1995.

Research is being conducted at North Dakota State University. The principal investigator anticipates that the work will be completed in the year 2001. The research with biological traits of herbicide-resistant weeds may require more time, depending upon whether the traits prove to be simply inherited or involve multiple genes with a complex inheritance.

NONFOOD AGRICULTURAL PRODUCTS PROGRAM, NEBRASKA

This work focuses on the identification of specific market niches that can be filled by products produced from agricultural materials, developing the needed technology to produce the product, and working with the private sector to transfer the technology into commercial practice. Major areas of application include starch-based polymers, use of tallow as diesel fuel, improvements in ethanol production, use of vegetable oil as drip oil for irrigation wells, production of levulinic acid for antifreeze, and the use cyclodextrins, corn starch, and production of cyclic peptides for plasticizers, personal care products, and pharmaceuticals. The principal researcher believes our ability to produce agricultural commodities in certain regions at times exceeds our needs for food and feed. These commodities are environmentally-friendly feedstocks which can be used in the production of many biochemicals and biomaterials that have traditionally been produced from petroleum. The production of the commodities and the value-added processing of these commodities is regional in scope.

The objectives of the Center are to identify niche markets for industrial utilization of agricultural products, improve and develop conversion processes as needed for specific product isolation and utilization, provide technical, marketing and business assistance to industries, and coordinate agricultural industrial materials research at the University of Nebraska, Lincoln. Accomplishments include developing a formula that combines starch from corn and wheat, plastic resin from polystyrene and polymethylmethacrylate and compatibilizing agents to make loose fill packaging materials. Collaborations with the private sector to optimize the technology and to initiate a startup company are ongoing. Crude degummed and dried soybean oil has been proven to be an effective drip oil for irrigation wells. Archer Petroleum in Omaha is developing a marketing plan for regional distribution through 2,500 distributors. Crude beef tallow has been converted to methylesters and studied as diesel fuel. Fuel tests and extensive engine studies have shown it to be compatible with petroleum diesel and diesel engines. Starch has been converted to levulinic acid using acid hydrolysis and an extruder. As an antifreeze, levulinic acid has a freezing point of -18 degrees C, which is not as low as conventional antifreeze but is environmentally friendly. Other industrial uses of levulinic acid need to be explored. Protein films have been made and evaluated for potential use as coatings and in laminated packaging materials. These films may have a unique application for use as sprayed-in-place agricultural mulches. Seeds or plants could be easily planted by puncturing the film on the soil surface. The functioning of the film to retain moisture and inhibit weeds will be studied next year.

The funding levels for this project are \$109,000 in 1990; \$110,000 per year in fiscal years 1991-1993; \$103,000 in fiscal year 1994; \$93,000 in fiscal year

1995; and \$64,000 in fiscal year 1996. A total of \$699,000 has been appropriated.

The non-Federal funding for this project is: in fiscal year 1992, \$315,000, fiscal year 1993, \$330,000, fiscal year 1994, \$330,000, fiscal year 1995, \$309,000, and fiscal year 1996, \$251,000. These funds were from Nebraska Corn, Soybean, Wheat, Sorghum and Beef Boards, World Wildlife Fund, Nebraska Bankers Association, United Soybean Board and National Corn Growers Association.

This work is being conducted at the Industrial Agricultural Products Center, L.W. Chase Hall, University of Nebraska, East Campus, Lincoln, Nebraska. Another two years will complete the projects currently given major emphasis.

NORTH CENTRAL BIOTECHNICAL INITIATIVE

The North Central Biotechnical Initiative has proposed to establish a competitive grant program for biotechnology research projects submitted as proposals by member institutions. Projects for fiscal year 1995 were solicited in plant biotechnology. Proposals are currently being evaluated through a peer review process for science quality and industrial reliance, expressed through industrial endorsements and research partnerships. The principal researcher believes the proposal to better link public and private research activities in plant biotechnology for enhanced commercialization possibilities of this area of agriculture research will contribute to regional and national priorities.

The work supported by this grant began in fiscal year 1995 and the appropriation for fiscal years 1995-1996 is \$2,000,000 per year for a total appropriation of \$4,000,000. At this time Purdue University has not allocated any non-federal funds for this grant.

Research will be conducted at eligible research universities in the North Central region. The researchers anticipate that work may be completed in fiscal year 1999.

OIL RESOURCES FROM DESERT PLANTS, NEW MEXICO

The Plant Genetic Engineering Laboratory --PGEL-- has been exploring the potential for the production of high value industrial oils from agricultural products. The effort has been focused on transferring the unique oil producing capability of jojoba into oilseed rape and soybean. With the development in the PGEL lab of technology to both isolate the enzyme components of oil biosynthesis and successfully transform the target plants, significant advances have been made with jojoba. In addition, oil enzymes have been studied in soybean, castor, oilseed rape, and meadowfoam. The principal researcher believes desert plant sources of valuable oils for industrial applications are typically low yielding and limited in climatic areas for farm production. Genetic engineering offers an opportunity to move genetic capability to high yielding, major crops. Many of the oils and their

derivative acids, waxes etc. can directly substitute for imports of similar polymer materials, especially petroleum.

Progress in the last year includes: insertion of the reductase gene into a model plant and rapeseed, isolation of the transacylase enzyme in jojoba liquid wax, continued characterization of the reductase gene, and isolation of the reductase gene. Screening a broader range of enzymes involved with lipid biosynthesis has resulted in the identification of three new enzymes of importance-- a hydroxylase from castor, a LPA acyl transferase from meadowfoam, and a carrier protein for oilseed rape. These are significant milestones toward accomplishing successful transfer of genetic capability.

This work began in fiscal year 1989 with a \$100,000 grant under the Supplemental and Alternative Crops program. Grants have been awarded under the Special Research Grants program as follows: fiscal year 1990, \$148,000; fiscal years 1991-1993, \$200,000 per year; fiscal year 1994, \$188,000; and fiscal years 1995-1996, \$169,000 each year. A total of \$1,374,000 has been appropriated.

Non-federal funds are not provided for operational portions of this research. However, New Mexico State University and the Plant Genetic Engineering Laboratory provide \$80,000 for in-kind support including faculty salaries, graduate student stipends, facilities, equipment maintenance, and administrative support services.

The research is being conducted by the Plant Genetics Engineering Laboratory at New Mexico State University, Las Cruces, New Mexico. The PGEL proposal for 1995 funds estimates that an additional 2-3 years would be required to move the project through its current phase. The applications of this research for improved management of natural resources will evolve and expand as technology in the area advances.

ORGANIC WASTE UTILIZATION, NEW MEXICO

The principal researcher believes the research will address the utilization of dairy waste combined with other high-carbon waste from agriculture and industry, including potash and paper waste, for composting. This approach to waste management will have high impact for states where dairy and agriculture are important industry sectors. This is especially true for New Mexico and the southwest United States where the dairy business is growing rapidly. This research will also provide an additional pollution prevention tool for the industrial sectors dealing with potash and paper waste. The original goal of the research is to determine the feasibility of simultaneously composting of dairy waste from agriculture and industry. The research will determine effects of utilizing composted waste, as opposed to raw waste, as a soil amendment on plant growth, irrigation requirements, and nutrient and heavy metal uptake.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 is \$150,000. The non-federal funds for the

duration of this grant from the state appropriation is \$50,000. There is another \$30,000 in-kind support from the industrial partners.

This work will be carried out in New Mexico under the direction of the Waste-Management Education and Research Consortium in collaboration with The Composting Council and industrial partners, such as Enviro--Ohio--, Plains Electric, and McKinley Paper--New Mexico. Completion date will be January 1999.

PEACH TREE SHORT LIFE

Progress continued in 1995 with focus on improvement of peach rootstocks for use in soils where the ring nematode, *Crictonemella xenoplax*, is present and contributing to peach tree short life. Efforts continued on evaluation of peach and related species for longevity and productivity potential on short life sites. More fundamental work has involved characterizing the biochemical nature of the factor(s) that inhibit egg hatch of the ring nematode. Other basic studies dealt with isolating and characterizing the genes of a bacterial antagonist responsible for killing the eggs of the ring nematode. Work also continued in greenhouse and field evaluations of root-soil zone bacteria isolated from soils suppressive to the ring nematode. Studies were continued on establishment of the ground cover nimblewill in peach orchards, including population density effects of the ground cover plant on degree of ring nematode suppression. The principal researcher believes this problem affects more than 20 percent of the peach acreage in the Southeastern U.S., and amounts to a local and regional need.

The original goal was to control peach tree short life in South Carolina, but new cooperative work with other southern states has increased the potential payoffs for the entire peach industry in the south. A highly-tested *Prunus* rootstock is being given the trademark "Guardian TM Brand BY520-9" and will be sold under the name Guardian. Guardian rootstocks are being tested in 22 states and provinces, and has performed very well at most sites. Genetic analysis of the ring nematode bacterial antagonist has revealed the nature of one of the genes associated with production of the toxin. Nimblewill grass ground cover suppressed ring nematode density below the damage threshold in field microplot studies.

Grants have been awarded from funds appropriated as follows: fiscal year 1981, \$100,000; fiscal years 1982-1985, \$192,000 per year; fiscal years 1986-1988, \$183,000 per year; fiscal year 1989, \$192,000; fiscal year 1990, \$190,000; fiscal years 1991-93, \$192,000 per year; fiscal year 1994, \$180,000, and fiscal years 1995-1996, \$162,000 each year. A total of \$2,879,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$149,281 state appropriations in 1991; \$153,276 state appropriations in 1992; \$149,918 state appropriations in 1993; \$211,090 state appropriations in 1994, and \$193,976 state appropriations in 1995.

The research is being conducted at the South Carolina Agricultural Experiment Station. The university researchers anticipate that some phases of the work will be completed in 1996, and the more complex studies should be completed in 1998.

PEST CONTROL ALTERNATIVES, SOUTH CAROLINA

This grant supports research and technology transfer to provide growers with alternatives for managing pests and to implement the use of new alternatives reducing the sole reliance on chemical pesticides. The investigators contributing to the research and technology transfer at South Carolina believe that the need for the development of alternatives for managing pests on vegetables is a regional and national problem. Contributions from the South Carolina work will impact vegetable production in the Southern region and consumers of vegetable production from the Southern region. New concepts and approaches developed in South Carolina may be useful throughout the nation.

The goal of this program is to investigate alternative methods of managing insects, plant diseases, and nematodes in vegetable crops as complements to or as substitutes for conventional chemical sprays. The progress report submitted in 1996 cites the following accomplishments: wirestem disease of cabbage was managed with three *Rhizoctonia* spp. isolates used as biocontrol agents. Cabbage treated with the biocontrol agent produced more cabbage heads than nontreated control treatment and the chemical treatment; reflective colored mulches used for tomato production indicate that reflected light from the plastic can affect root and shoot development and nematode injury to plants. Results indicate that marketable yield in tomato with colored mulch treatment are similar to fumigant treatment. Colored mulches provide a novel approach to modifying plant growth and root knot nematodes and an alternative to methyl bromide as a soil fumigant; modified thresholds for caterpillar pests in collards and tomatoes were developed which incorporated the impact of beneficials in the system. A sampling plan for tomato fruitworm which considered numbers of parasitized eggs was used to schedule insecticide sprays. Numbers of insecticide sprays were reduced by 75- 100 percent and the weight of marketable fruits was the same in plots receiving weekly sprays.

This work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$125,000 per year. In fiscal year 1994 the appropriation was \$118,000 and in fiscal years 1995 and 1996, \$106,000 per year. A total of \$580,000 has been appropriated. South Carolina has provided \$124, 860 per year from State appropriations.

This research and technology transfer program is being conducted at the South Carolina Agricultural Experiment Station, Clemson University. The researchers indicate that the work may be completed by the end of the current fiscal year.

PESTICIDE CLEARANCE

The pesticide clearance program (IR-4) includes the State Agricultural Experiment Stations and Agricultural Research Service (ARS). IR-4 provides the national leadership, coordination and focal point for obtaining tolerance and safety data for pesticides and biological control agents for specialty crops such as horticultural crops. The agricultural chemical industries have not been able to economically justify the time and expense to conduct the necessary research for pesticides with small market potential. With the Federal registration resulting from this research, a large number of small acreage crops such as vegetables, fruits, nuts, spices and other specialized crops have been provided with needed crop protection against pests. Protocols are written after careful review with input from representatives of grower groups, industry and researchers. The scientists then carry out field trials on priority needs to determine their effectiveness, safety and usefulness and then analyze the field grown commodities, where appropriate, to identify and quantify any persistent residues that may affect the registration process. This is done according to EPA's Good Laboratory Practices guidelines. The research program then assimilates the data from all the participating experiment stations, grower groups and chemical industry, and petitions are written for tolerances and Federal registration or reregistration. The principal researcher believes the basic mission of IR-4 is to aid producers of minor food crops and ornamentals in obtaining needed crop protection products. IR-4 is the principal public effort supporting the registration of pesticides and biological pest control agents for the \$31 billion minor crop industry. This is a national research effort which identifies needs by a network of users and state university and Federal researchers. This research facilitates the Federal registration process, and on this basis, is highly significant to national needs.

The goal is to obtain minor use and specialty use pesticide reregistrations and assist in the maintenance of current registrations. And to assist with the development and registration of biopesticides and safer pesticide products useful in IPM systems for minor crops. This research effort has been responsible for data in support of 2,074 food use clearances, including 1,127 registrations since 1984, 3,602 ornamental registrations, and 18 minor use biopesticide registrations. Mr. Chairman, IR-4 continues to have a high return, which according to EPA, results in 40 percent of all EPA pesticide registrations.

Grants have been awarded from appropriated funds as follows: Program redirection in fiscal year 1975, \$250,000; fiscal year 1979, \$500,000; fiscal years 1977-1980, \$1,000,000 per year; fiscal year 1981, \$1,250,000; fiscal years 1982-1985, \$1,400,000 per year; fiscal years 1986-1989, \$1,369,000 per year; fiscal year 1990, \$1,975,000; fiscal year 1991, \$3,000,000; fiscal years 1992-1993, \$3,500,000 per year; fiscal year 1994, \$6,345,000; and fiscal year 1995, \$5,711,000. A total of \$41,107,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$891,856 state appropriations and \$65,402 industry in 1991; \$1,002,834 state appropriations and \$104,292 industry in 1992; \$1,086,876 state appropriations and \$310,133 industry in 1993; \$550,160 state appropriations, \$408,600 industry, and

\$924,169 miscellaneous in 1994; and \$775,432 state appropriations, \$266,714 industry, and \$751,375 miscellaneous in 1995.

Field work is performed at the State and Agricultural Experiment Stations. Laboratory analysis is conducted primarily at the California, New York, Florida and Michigan Agricultural Experiment Stations with assistance by the Oregon, Hawaii, North Dakota, Arkansas, North Carolina, Washington, Virginia, Mississippi, Idaho, Pennsylvania and New Jersey Agricultural Experiment Stations. Protocol development, data assimilation, writing petitions, and registration processing are coordinated through the New Jersey Agricultural Experiment Station. ARS is conducting minor use pesticide studies at locations in California, Georgia, Illinois, Maryland, Ohio, Oregon, South Carolina, Texas, and Washington. ARS laboratories in Georgia, Maryland and Washington are cooperating with analyses.

Selected categories of the Special Research Grants program address important national and regional research initiatives. The pesticide clearance program involves research on biological systems that by their nature are ever changing and presenting new challenges to agriculture. The IR-4 workload is anticipated to be long term because of the sensitivities about food safety and the environment, plus the reregistration of older pesticides mandated by the 1988 amendments to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). IR-4 developed a strategy in 1989 to defend the needed minor use pesticides that were subject to reregistration but would not be supported by industry for economic reasons. IR-4 will fulfill these commitments by December 1997, the final date for the reregistration process mandated by FIFRA. IR-4's updated strategic plan focuses on the registration of biopesticides and safer pest control technology for minor crops. This program thrust will be carried out along with the traditional minor crop pesticide clearance program.

PESTICIDE IMPACT ASSESSMENT

Research funded is targeted to fill pesticide informational needs and for pesticide assessment reports for the National Agricultural Pesticide Impact Assessment Program of the USDA and used by the Environmental Protection Agency--EPA. Research has focused on pesticide benefits and use surveys, environmental fate of pesticides, pesticide residues, and exposure and risk assessments. The principal researcher believes this project is a national effort involving all State Agricultural Experiment Stations and State Cooperative Extension Services coordinated by USDA. The program provides USDA with benefit assessment reports and contributes to the EPA pesticide regulatory decisionmaking process. For this reason, the principal researchers believe this research to be primarily of national need.

The original and current goal is to provide comprehensive assessments on pesticides by collecting and coordinating research and information from our state cooperators toward the EPA decisionmaking process pertaining to pesticide regulations. Data and objective interpretations of pesticide benefits and risks are required to meet these regulatory decisions. Research efforts to date have

contributed important information on environmental effects, human exposure risks, economic impacts, and crop quality and yield data. All of these data are important to the continued registration of a variety of pest control agents. Information has been generated which is useful in minimizing potential human risks; including application technology, pesticide detection methodology, and determination of factors governing environmental fate. A significant accomplishment is the development of an economic impact model which has been made available for expanded use by our state liaison representatives at the land-grant universities. The program has also developed experimental data describing approaches to significantly reduce atmospheric emissions of methyl bromide used in agriculture to control soil borne pests. Future benefits, for this current research with methyl bromide, will result in more effective management of soil pests and a reduction of atmospheric release of methyl bromide.

Grants have been awarded from funds appropriated as follows: Fiscal years 1977-1981, \$1,810,000 per year; fiscal years 1982-1985, \$2,069,000 per year; fiscal years 1986-1988, \$1,968,000 per year; fiscal year 1989, \$2,218,000; fiscal year 1990, \$2,437,000; fiscal years 1991-1993, \$2,968,000 per year; fiscal year 1994, \$1,474,000; and fiscal years 1995-1996, \$1,327,000 year year. A total of \$40,917,000 has been appropriated.

A major source of non-federal funds comes through the State Agricultural Experiment Stations. Time spent on Pesticide Impact Assessment activities by each state Liaison Representative and other faculty is paid for by that State. Total state support is estimated at \$2,600,000 per year.

This work is underway at State Agricultural Experiment Stations in 53 states and Territories. Competitively awarded research funds which fill both national and regional informational needs are coordinated through a lead state in each of the four regions of the United States: California--West; Ohio--North Central; Northeast--Pennsylvania; and Florida--South. Impact assessment activities related to reregistration as mandated by the Federal Insecticide, Fungicide, and Rodenticide Act--FIFRA--amendments of 1988 are projected to be completed by the end of 1997. There will be continuing economic and biological issues related to benefits and risks of registered pest control agents. In addition, the pesticide impact assessment program involves research on biological systems that are ever changing and which present new challenges to agriculture. There is a high priority for continuation of these ongoing projects into the twenty-first century, particularly in view of increased public concerns about food safety and the environment.

PHYTOPHTHORA ROOT ROT, NEW MEXICO

Efforts have continued on the development of chile cultivars with improved levels of resistance to the Phytophthora root rot and foliar blight. Other work has involved development of cultural practices that will enhance maintenance of the new cultivars introduced to field production conditions. The principal researcher believes the spread of this disease continues in the west Texas, New Mexico, and Eastern Arizona chile pepper production regions.

The original goal was to improve chile production through genetically superior cultivars, combined with their maintenance. It is anticipated that novel control techniques, of national significance, may be a long-term outcome of this research. Basic studies involved completion of biochemical analyses of differences among various infection-induced compounds that differentially affect the growth of virulent and avirulent isolates of *Phytophthora capsici*. It was confirmed that the encystment and germination of the primary inoculum, zoospores, is regulated by calcium ion release and re-uptake. Applied work confirmed the value of drip irrigation for disease control, as well the value of mulch to reduce spread and overall levels of the disease. More than 5,250 chile seedlings were screened for resistance in the greenhouse using a new, superior screening technique developed at the New Mexico Station.

The work supported by this grant began in fiscal year 1991 with an appropriation of \$125,000 for fiscal year 1991. The fiscal years 1992-1993 appropriation was \$150,000 per year; \$141,000 in fiscal year 1994; and \$127,000 in fiscal years 1995-1996, each year. A total of \$820,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$363,965 state appropriations in 1991; \$363,965 state appropriations in 1992; \$363,965 state appropriations in 1993; \$363,965 state appropriations in 1994, and \$148,000 state appropriations in 1995. Research is being conducted at New Mexico State University. The university researchers in the current proposal now present a five-year framework, thus indicating that the work may be completed in fiscal year 2001.

POTATO RESEARCH

Scientists at several of the State Agricultural Experiment Stations in the Northeast, Northwest, and North Central States, are breeding new potato varieties, high yielding, disease and insect resistant potato cultivars, adapted to the growing conditions in their particular areas, both for the fresh market and processing. Research is being conducted in such areas as protoplast regeneration, somoclonal variation, storage, propagation, germplasm preservation, and cultural practices. CSREES has requested that a part of the research program specifically address the late blight problem. The principal researcher believes this research effort addresses needs of the potato producers and processor. Research areas being studied include storage and post-harvest handling of potatoes and their effect on potato quality. Regional needs are breeding and genetics, culture factors and pest control on potato production.

The original goal was to improve potato production through genetics and cultural practices as well as improve storage for quality potatoes for processing and fresh market. This research has resulted in a number of new high yielding, good quality, disease and insect resistant, russet type cultivars, which are now being used in the processing industry and in the fresh market. Research by the Pacific Northwest States of Washington, Oregon and Idaho has resulted in the release of a number of cultivars, including Gemchip, Calwhite, Century Russet,

Ranger Russet, Frontier Russet and Chipeta. In addition, North Dakota developed Norkatah as a result of this program.

Grants have been awarded from funds appropriated as follows: fiscal year 1983, \$200,000; fiscal year 1984, \$400,000; fiscal year 1985, \$600,000; fiscal years 1986-1987, \$761,000 per year; fiscal year 1988, \$997,000; fiscal year 1989, \$1,177,000; fiscal year 1990, \$1,310,000; fiscal year 1991, \$1,371,000; fiscal years 1992 and 1993, \$1,435,000 per year; fiscal year 1994, \$1,349,000; and fiscal year 1995, \$1,214,000. A total of \$13,010,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$401,424 state appropriations, \$4,897 product sales, \$249,830 industry, and \$30,092 miscellaneous in 1991; \$567,626 state appropriations, \$6,182 product sales, \$334,478 industry, and \$44,323 miscellaneous in 1992; \$556,291 state appropriations, \$9,341 product sales, \$409,541 industry and \$44,859 miscellaneous in 1993, \$696,079 state appropriations, \$21,467 product sales, \$321,214 industry, and \$226,363 miscellaneous in 1994; and \$935,702 state appropriations, \$35,376 product sales, \$494,891 industry, and \$230,080 miscellaneous in 1995.

The research work is being carried out at the Cornell, Idaho, Maine, Maryland, Michigan, North Dakota, Oregon, Pennsylvania, and Washington State Agricultural Experiment Stations. The university researchers anticipate that their work may be completed in fiscal year 1996.

PRESERVATION AND PROCESSING RESEARCH, OKLAHOMA

Fruit, vegetable, and tree nut cultivars have been evaluated for harvest, storage, shipping, and processing potential; critical biological processes limiting shelf life and potential for mechanical harvest of fresh horticultural commodities have been investigated; optimum storage and shipping conditions for commodities have been investigated and identified; a device was developed to nondestructively measure maturity for selected fruits and vegetables; and new processing systems for improving the marketability of oilseeds have been developed. The maturity sensing device is under commercial development and should be marketed within three years. The new processing technologies are being developed for commercial adaptation, with processing plant specifications and product end-use testing to be completed within three years. Specialized harvesting, handling, and storage systems for processing horticultural crops are under development to support growth of the current food processing industry and to provide new crops for utilization by the industry.

The principal researcher believes the research and development activities for preservation and processing research in Oklahoma support development of instrumentation and procedures to efficiently handle and process horticultural commodities, with special emphasis on those commodities best suited for profitable production in that region. Nationally, technological improvements in fruit, nut and vegetable handling systems are critically needed to supply domestic markets and to support continued participation in international commerce.

Regionally, processing systems under development for commercial adaptation provide crucial solutions required for market expansion of pecans, affecting product market potential and value throughout the southern U.S. Locally, improvements in postharvest handling and processing are necessary to support growth of the industry and ensure competitive involvement in national and international commerce of horticultural commodities uniquely suited for production in Oklahoma. The research program addresses high priority national research topics through development of new technologies for handling and processing agricultural products and in evaluation of critical processes controlling plant growth and development.

The goal of the research has been to define the major limitations for maintaining quality of harvested fruits, vegetables and tree nuts and prescribe appropriate harvesting, handling and processing protocols to extend shelf life and marketability of harvested horticultural commodities, thus maintaining profitability of production systems and assuring an economic market niche for Oklahoma producers and food processors. A systems approach to develop complementary cropping, harvesting, handling and processing operations has resulted in development of improved handling systems for cucurbit and tree fruit crops. Research and development activities to support commercial adaptation of instrumentation for nondestructive on-line determination of fresh fruit and vegetable maturity have been supported and industry prototypes should be available by 1997. An Oklahoma-based manufacturer is cooperating on this project, and matching funding to support technology transfer for commercialization of the instrument has been obtained from a state agency. Matching funding also supports development of new processing systems for partial oil reduction of tree nuts, to extend shelf life and lower the calorie content for the raw or processed product. Technologies and procedures previously developed for cucurbit and tree fruit systems are now being applied to support development of profitable okra, spice crop--pepper, sage and basil--, tree nut, sweetcorn, and marigold cropping, handling and light processing systems, with a targeted completion date of 1999.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$100,000; fiscal year 1986, \$142,000; fiscal year 1987, \$242,000; fiscal years 1988 and 1989, \$267,000 per year; fiscal year 1990, \$264,000; fiscal year 1991, \$265,000; fiscal year 1992, \$282,000; fiscal year 1993, \$267,000; fiscal year 1994, \$251,000; and fiscal years 1995-1996, \$226,000 each year. A total of \$2,799,000 has been appropriated.

Support from the State of Oklahoma, through the Oklahoma Agricultural Experiment Station and through the Oklahoma Centers for Advancement of Science and Technology, have been provided as follows: fiscal year 1991, \$126,900; fiscal year 1992, \$209,783; fiscal year 1993, \$219,243; fiscal year 1994, \$308,421; and fiscal year 1995, \$229,489. A total of \$1,093,836 from non-federal funds has been provided over the duration of this project. An additional \$16,100,000 has been committed by the State of Oklahoma for development of an Agricultural Products and Food Processing Center to support, among other programs, the horticulture processing initiatives.

This work is being conducted at the Oklahoma State Agricultural Experiment Station, in conjunction with ongoing production research at the Wes Watkins Agricultural Research and Extension Center and the South Central Agricultural Research Laboratories. The project investigators anticipate that the fiscal year 1995 grant will support work through June 1997.

PREHARVEST FOOD SAFETY, KANSAS

The project is to examine the incidence of shedding of *E. coli* 0157:H7 in feces of beef cattle and the impact of various management procedures such as calving, weaning, etc. on the frequency and amount of shedding of these bacteria. The study will compare small and large cow-calf operations in Kansas. The principal researcher has indicated a need to establish the ecology of this bacterium in beef cattle as a basis for designing management systems to reduce the prevalence of this human pathogen in cattle prior to slaughter.

The original goal of this research was to determine the relative incidence of shedding of *E. coli* 0157:H7 from beef cattle in small and large cow-calf operations and the impact of various management or other events in the production cycle on this shedding event. The principal researcher expects that this information will assist in reducing the prevalence of this organism in beef cattle and, thus, reduce the incidence of food-borne illness in humans due to this bacterium.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 is \$212,000. The non-federal funds and sources provided for this grant are proposed to be \$150,000 state appropriations and \$91,450 in contributed indirect costs in fiscal year 1996.

The research will be conducted at Kansas State University and at ranches in Kansas, Colorado and Nebraska. The principal researchers anticipate that the work will be completed in fiscal year 1998.

RED RIVER CORRIDOR, MINNESOTA AND NORTH DAKOTA

The purpose is to conduct a program of research to assess emerging international trade opportunities for the Red River trade region and develop the means to be able to compete for such opportunities in order to stimulate economic development. Projects were initiated to assess the Corridor's transportation infrastructure, research and development capability, competitive position, export opportunities in Europe and Latin America, and trade strategies. Emphasis is placed on technology and information transfer to inform users and potential users. There is a regional need to find new and alternative markets to replace traditional markets that have little or no growth potential and to develop the capabilities to compete successfully for these markets. International trade is expected to support continued economic growth in this primarily rural, agriculturally dependent region. The goal is to identify and assess export market opportunities and develop strategies and programs to improve the region's competitiveness in international trade. The program has completed studies on transportation services and costs,

the region's trade position on specialty crops and metal fabrication, agro-industrial research and development capabilities, and export opportunities through collaboration with Canada. Studies in progress include trade strategies of selected European regions and their implications for regional trade strategies, trade opportunities with Mexico, bilateral technology transfer among businesses in the region, assessment and implications of Latin American transportation systems on trade, opportunities and linkages between rural Mexico and the Red River region, and relationships between social structure and rural development. This grant will be used to fund projects to expand the use by rural businesses of state-of-the-art telecommunications technologies to expand markets and up-grade worker skills.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992-1993 was \$200,000 per year, \$188,000 in fiscal year 1994, and \$169,000 in fiscal years 1995-1996. A total of \$926,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$4,300 State appropriations and \$2,269 miscellaneous for a total of \$6,569 in 1992; \$16,000 State appropriations, \$4,138 industry, and \$16,688 miscellaneous for a total of \$36,826 in 1993; and \$1,600 State appropriations, \$1,637 industry, and \$29,501 miscellaneous for a total \$32,738 in 1994. The preliminary allocation of non-federal matching funds for 1995 is \$2,000 State appropriations, \$7,500 industry, and \$6,500 miscellaneous for a total of \$15,000. Therefore, a total of \$91,133 non-federal funds has been provided through FY 1995. Data for FY 1996 are not available at this time.

The research program is carried out by the University of Minnesota, Crookston, in collaboration with North Dakota State University. The researchers indicate that this phase of the program may be completed in fiscal year 1997.

REGIONAL BARLEY GENE MAPPING PROJECT

The objectives of this project are to: construct a publicly available medium resolution barley genome map; use the map to identify and locate loci, especially quantitative trait loci controlling economically important traits such as yield, maturity, adaptation, resistance to biotic and abiotic stresses, malting quality, and feed value; provide the framework for efficient molecular marker-assisted selection strategies in barley varietal development; identify chromosome regions for further, higher resolution mapping with the objective of characterizing and utilizing genes of interest; and establish a cooperative mapping project ranging from molecular genetics to breeding that will be an organizational model for cereals and other crop plants. The principal researcher believes barley breeders nationwide need information about the location of agriculturally important genes controlling resistance to biotic and abiotic stresses, yield, and quality factors in order to rapidly develop new, improved cultivars and respond to disease and pest threats. This project provides that information along with appropriate molecular markers to track these traits through the breeding and selection process.

The original goal of this project has been to develop a restriction fragment length polymorphism map for barley and associated important genetic traits as a map to provide closely linked molecular markers for barley breeders. The project successfully mapped 300 molecular markers. Portions of the map are described as very dense and contain key location points for enhanced utility. The project is now using the map to locate quantitative traits loci of economic importance. These include genetic determinations for yield, maturity, rust resistance, plant height, seed dormancy, and components of malting quality. Technical papers have been published to report research results to the scientific community.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$153,000; fiscal year 1991, \$262,000; fiscal years 1992-1993, \$412,000 per year; fiscal year 1994, \$387,000; and fiscal years 1995-1996, \$348,000 each year. A total of \$2,322,000 has been appropriated.

The nonfederal funds and sources provided for this grant were as follows: \$203,760 from industry in 1991; \$212,750 from industry in 1992; \$115,000 from industry in 1993; and \$89,000 from industry in 1994; and \$35,000 from the State of Washington and \$108,000 in other nonfederal funding, for a total of \$143,000 in 1995.

Research is being conducted in the following state agricultural experiment stations; Oregon, Colorado, Washington, Montana, Idaho, North Dakota, Minnesota, New York Virginia and California. It is anticipated that researchers will complete the program plan at the end of fiscal year 2000 using State and other non-federal funding sources.

REGIONALIZED IMPLICATIONS OF FARM PROGRAMS

The purpose of this research is to estimate the impacts of farm, trade, and fiscal policies and programs and assess their alternatives on the economic viability of typical crop and livestock production operations located in different regions of the United States. The principal researcher believes there is a national need for research that provides an assessment and evaluation of the potential impacts of Federal farm, trade, and fiscal policies on the economic viability and competitiveness of farmers located in different regions of the United States. Policy impacts vary regionally because of differences in farm productivity, input costs, climate, farm enterprises and size. The research results are widely used by farmers and public policymakers concerned about minimizing policy and program inequities between regions and farm sizes.

The original and current goal is to provide the farm community, extension, and public officials information about farm, trade, and fiscal policy implications by developing regionalized models that reflect farming characteristics for major production regions of the United States. The researchers have developed a farm level policy analysis system encompassing major U.S. farm production regions. This system interfaces with existing agricultural sector models used for farm, macroeconomic, and trade policy analysis. The universities have expanded the number and types of representative farms. Typical farm models also are being

developed for Mexico and Canada under a collaborative agreement in analyzing impacts of the North American Free Trade Agreement.

More than two dozen policy studies were completed this past year at the request of policymakers and farm groups including analyses of the impacts of wheat exports, rough rice marketing pools, impacts of the General Agreement on Tariffs and Trade on representative crop farms in the U.S., elimination of the rice program, conservation reserve program impacts on farms in the Great Plains, and revised baseline projections for representative farms. The representative farms were used extensively for analysis of farm level impacts for alternative farm program proposals considered for the 1995-1996 farm bill. They were also used to analyze the impacts of alternative income and estate tax proposals at the request of House and Senate Agriculture Committees.

The work supported by this grant began in fiscal year 1990 and the appropriation for fiscal year 1990 was \$346,000. The fiscal years 1991-1993 appropriations were \$348,000 per year; \$327,000 in fiscal year 1994; and \$294,000 in each of the fiscal years 1995 and 1996. A total of \$2,305,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$288,843 State appropriations and \$46,773 industry for a total of \$335,616 in 1991; \$45,661 State appropriations in 1992; \$33,979 State appropriations in 1993; \$40,967 State appropriations in 1994; \$161,876 State appropriations in 1995; and \$187,717 for 1996.

Research is being conducted by the Texas A&M University and University of Missouri at Columbia. The principal investigators indicate that this program is of a continuing nature for the purpose of assessing the impacts of existing policies and issues and proposed policy and program changes at the individual farm level for feed grain, wheat, cotton, rice, oilseed and livestock producers. Future activities will be supported primarily by state and non-federal funds.

RICE MODELING

The purpose of this research project is to develop a rice industry model with domestic and international components to aid U.S. farmers, millers and policymakers in making production, investment, marketing and public policy decisions. The principal researchers believe research is needed to assist both the U.S. rice industry and national policymakers in assessing the impact of existing and proposed changes in public policies for rice. This research enables improved analysis of both international and domestic policy changes on rice production, stocks, prices of substitute crops and consumption.

The original goal of this research was to develop international, national and regional models to analyze the impact of foreign and domestic policy changes, and forecast changes in production, stocks, prices of substitute crops and consumption

This is the first year this project has been funded by CSREES and the appropriation for fiscal year 1996 is \$395,000. The work actually began about four years ago, and the amount for total Federal research grants from various sources have totaled roughly \$2 million prior to this year. The non-federal funds over the 4 years prior to this year totaled approximately \$500,000. For the 1996 fiscal year, state appropriations are estimated to be \$178,000.

The research is being carried out at the University of Arkansas-Fayetteville and the University of Missouri-Columbia. The researchers anticipate that the domestic portion of the rice model will be complete by September 30, 1997. The international modeling research is a little over half completed and the researchers estimate another 5 years is required.

RURAL POLICIES INSTITUTE

The Rural Policy Research Institute is a consortium of three universities designed to create a comprehensive approach to rural policy analysis. The Institute conducts research and facilitates public dialogue to increase public understanding of the rural impacts of national, regional, state, and local policies. The principal researcher believes there is a need to be able to estimate the impacts of changing programs and policies on rural people and places. Objective public policy analysis can provide timely and accurate estimates of the impacts of proposed policy changes to allow more reasoned policy discussions and decisions.

The original goal of the Rural Policy Research Institute was to create a new model to provide timely, accurate, and unbiased estimates of the impacts of policies and new policy initiatives on rural people and places. The Institute has completed a number of successful policy research projects and developed three analytic models central to its mission. These projects focus on the rural implications of health care, education, housing, rural development, tax and telecommunications policy proposals. In addition, the Institute uses expert panels to provide policy decision support to a number of policy making groups at national and State levels. Currently, 44 nationally prominent scientists from 33 institutions serve as scholars on various RUPRI Expert Panels. The Rural Policy Research Institute will continue to use its research base and expert panels to respond to new requests from policy decision makers. Continuing research will strengthen the Institute's capacity to provide timely, accurate assessments of rural policy impacts.

The work supported by these grants began in fiscal year 1991 and the appropriation for fiscal year 1991 was \$375,000. The fiscal year 1992, appropriation was \$525,000; for fiscal year 1993, \$692,000; for fiscal year 1994, \$494,000; and fiscal years 1995-1996, \$644,000 each year. A total of \$3,374,000 has been appropriated.

Aggregated non-federal funds to support the Rural Policy Research Institute across the three universities involved include unrecovered indirect costs, salary support from university and other non-federal sources, and various other grants, contracts, and reimbursable agreements. They amounted to \$316,458 for fiscal year 1991; \$417,456 in fiscal year 1992; \$605,302 in fiscal year 1993;

\$537,834 in fiscal year 1994; and \$584,516 in fiscal year 1995. Estimates for fiscal year 1996 are \$576,782. Total to date is \$3,038,348.

The Institute's member universities are: the University of Missouri-Columbia; the University of Nebraska-Lincoln; and Iowa State University, Ames, including researchers from other states and universities. Current funding will sustain activity through January 1997.

RURAL DEVELOPMENT CENTERS

The Centers address a broad spectrum of problems facing rural people and places with integrated programs of research and outreach. They stimulate and focus the research of institutions of higher education on rural problems. They inform State and local governments, non-profit and volunteer groups, community organizations and small businesses. Most importantly, the Centers provide collaboration and coordination on regional and national issues to avoid duplication and speed the dissemination of research findings to the general public. The principal researcher believes that at the national level, the Centers are the only rural development organizations positioned to effectively integrate research and programmatic outreach across the Land-Grant University system. In a review of the Centers by a national panel of rural experts, one reviewer commented that if the Centers did not currently exist, we would have to invent them because there is no other organization to do what they do. The regional and local needs for research are stated in the annual proposals of the Centers to the Agency. The precise topical focus of the proposals varies from year to year and across the four centers. Input to these proposals comes through an advisory panel and a board of directors which include individuals from local and State governments or other rural development interests at the grass-roots level. Thus, the specific need for the Centers' research is dynamically determined and reviewed annually at regional and local levels. The principal researcher believes this research to be of national, regional or local need.

The original goal of the Centers was to regionally coordinate research and extension programs authorized under the Rural Development Act of 1972. Over time they have been increasingly looked to for both programmatic leadership and coordination and have emerged as the dominant regional and national rural development institution within the Land-Grant University system. A list of selected examples of the Centers' accomplishments follows: (1) Faculty from West Virginia University and the University of Maine are working towards policy development to improve the quality of life of rural infants. Researchers discovered that rural children are often born in a Northeast Center-sponsored project with low birth weight, seriously hindering their ability to see, hear, and speak after they leave the womb. The researchers are concentrating on proving how changes in health policies could be translated into dollar savings through building a model for prenatal care. (2) The Georgia Appraisal Program, developed through a grant from the Southern Center and other organizations, has been estimated to save the state's taxpayers 2 to 4 million dollars since it was installed. (3) The Montana Extension Service has helped eight communities hold onto more than 1,200 jobs through application of the western business retention and expansion program.

Based on the success of its work in business retention and expansion, Governor Racicot has asked Montana Extension Service to help extend the program in a statewide assessment of the potential for business retention and expansion. The Governor's plan is to work with 100 Montana businesses during the coming year. (4) The western region's Business Retention and Expansion Program enhanced the business climate in Portales, New Mexico. This new climate is partly responsible for location of a milk processing plant in Portales employing 15 people, with 126 people employed in transporting the milk, and an additional 300 on-farm jobs on eastern New Mexico dairy farms producing milk to supply the new plant. (5) The Northeast Center conducts a Parent Education Program in an attempt to break the vicious cycle of child abuse plaguing our society. Through 10-week education workshops, the court mandated and referred abusive parents participating in the program to examine different discipline styles and evaluate positive alternatives to negative techniques. For example, abusive parents who were often abused themselves as children learn that children respond more readily to positive rewards than to corporal punishment. This program has greatly influenced court placement and the reunion of children with their biological parents in their home environments.

Grants have been awarded from funds appropriated as follows: fiscal year 1971, \$75,000; fiscal year 1972, \$225,000; fiscal year 1973, \$317,000; fiscal years 1974-1981, \$300,000 per year; fiscal years 1982-1985, \$311,000 per year; fiscal years 1986-1987, \$363,000 per year; fiscal year 1988, \$475,000; fiscal year 1989, \$500,000; fiscal year 1990, \$494,000; fiscal years 1991-1993, \$500,000 per year; fiscal year 1994, \$470,000; fiscal year 1995, \$423,000; and fiscal year 1996, \$423,000. A total of \$9,272,000 has been appropriated.

Non-federal funds available to the four Regional Centers for Rural Development were: fiscal year 1991, \$1,117,000; fiscal year 1992, \$790,000; fiscal year 1993, \$900,000; fiscal year 1994, \$776,591, and fiscal year 1995, \$710,050; for a total of \$4,293,601 across the five years for which there are complete data.

The regional rural development centers include the following: Northeast Regional Center for Rural Development, Pennsylvania State University; North Central Regional Center for Rural Development at Iowa State University; Southern Rural Development Center at Mississippi State University; and Western Rural Development Center at Oregon State University. Most of the research sponsored by the four regional centers is actually performed by resident faculty at land-grant universities in the respective region through subcontracts from that center's grant. In addition, the special project at North Dakota State University is included in the appropriation.

RUSSIAN WHEAT APHID

This grant is for research that leads to control methods for the exotic pest, the Russian wheat aphid--RWA--in wheat and barley. The primary approaches are biological control and genetic resistance in the crop. Considerable emphasis also is placed on developing predictive sampling and monitoring tools including an understanding of migration and dispersal that enable producers to anticipate

outbreaks and to be prepared to take control measures when necessary. There are five state teams working in concert on these control measures. The work is coordinated through an on-going regional coordinating committee. The principal researcher believes the Russian wheat aphid is an exotic pest that entered the western United States without its normal complement of biological control agents. Likewise, the commercially- available germplasm for wheat and barley was not resistant to this pest. As customary with this kind of invading pest, foreign exploration was conducted to discover, characterize, and import exotic biological control agents and crop germplasm that could be incorporated into pest management tools. The movement and dispersal between crops and regions are also important to the management of the insect. The regional coordination provides a medium for infusion and dissemination of research findings on the Russian wheat aphid pest to states other than the five included in this project.

The original goal of this research was to develop control tactics and strategies for the Russian wheat aphid on wheat and barley. Resistant varieties of wheat are being released in several states and improvements in the level of resistance are being developed through pyramiding genes, developing cultivars with two or more genes conditioning resistance. Parasites are being introduced and becoming established. For example, in California the parasite *Aphelinus albipodus* is established in northern California and providing a variety of evidence that it may become an effective widespread parasite regulating low density populations of RWA in tightly curled leaves. Naturally-occurring predators, although not effective by themselves in regulating RWA under worst-case scenarios, are becoming more adapted to searching for and destroying RWA at lower densities than in previous years. A variety of plants that harbor aphids and their parasites can be planted in strips adjacent to wheat and serve as a refuge and source for parasitoids for the grain crops. Full product registration was granted in August 1995 for a seed-applied systemic insecticide to control Russian wheat aphid and other cereal aphids in wheat. This new product, imidacloprid, represents a line of defense against cereal aphids that is compatible with the biological controls, since only foliage feeders are directly targeted. Understanding the dispersal and migration of Russian wheat aphid in California allows farm advisers to predict that widespread outbreaks will probably occur only every three to five years. Local incidence of high populations might occur more frequently but these populations are likely to be isolated. Planting dates impact yield reductions. Planting dates prior to December 15 in California showed approximately 20 percent less yield loss than planting dates after December 15. In summary, a number of management practices are being developed to reduce farmer losses to Russian wheat aphid.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$100,000; fiscal year 1990, \$346,000; fiscal year 1991, \$350,000; fiscal years 1992 and 1993, \$437,000 per year; fiscal year 1994, \$505,000; and fiscal years 1995-1996, \$455,000 each year. A total of \$3,085,000 has been appropriated.

The source and amount of non-federal funds by fiscal year for the participating states are as follows: Colorado supported this project in fiscal year

1992 with \$800,418 in fiscal year 1993 with \$800,411 in state appropriations. Other non-federal funds from Colorado were \$15,000 per year for fiscal year 1992 and fiscal year 1993. State supported funds from Washington were \$158,377 in fiscal year 1991, \$166,127 in fiscal year 1992, and \$175,522 in fiscal year 1993. Other support from Washington was \$38,798 in fiscal year 1991, \$33,921 in fiscal year 1992, and \$31,454 in fiscal year 1993. From Oregon, the state supported the project with \$92,132 in fiscal year 1991, \$105,536 in fiscal year 1992, \$113,592 in fiscal 1993 and \$115,714 in fiscal year 1994. Idaho provided state support with \$102,175 in fiscal year 1991, \$164,287 in fiscal year 1992, \$172,564 in fiscal year 1993, and \$153,134 in fiscal year 1994. Other support from Idaho was \$104,775 in fiscal year 1991, \$55,926 in fiscal year 1992, \$66,973 in fiscal year 1993, and \$102,395 in fiscal year 1994. California supported this project in fiscal year 1993 and fiscal year 1994 with \$67,000 per year.

This research is being conducted by Washington State University, Oregon State University, University of Idaho, University of California, and Colorado State University. It is anticipated that the research will be completed in 1997 for Idaho, Oregon, Colorado, and California, and in 1998 for Washington.

SEAFOOD HARVESTING, PROCESSING, AND MARKETING, MISSISSIPPI

Compounds that are generally recognized as safe will be tested for their potential to control pathogenic *Vibrio vulnificus* that is associated with gastroenteritis and fatal septicemia following consumption of raw oysters. The researchers are also evaluating a new impedance technology to objectively and rapidly determine the freshness of seafoods. A third area of research involves utilizing value-added processing to convert seafood processing by-products into commercially viable products such as natural seafood flavors. The principal researcher believes national needs reflected in the project include providing consumers with affordable alternative seafood products. Alternative sources of seafood protein are needed because of a drastic decline in natural harvests due to over exploitation. Other national needs addressed in this project include reducing pollution during seafood and aquaculture food processing by converting byproducts into value-added food ingredients or materials. A regional interest for the Gulf coast is the potential devastation of the oyster industry if harvests are severely restricted during warm months. The present project seeks to provide alternative processing strategies to control foodborne disease agents in oysters. Locally, catfish processors are a major employer of the severely economically depressed Delta region of Mississippi. By further enhancing the value of catfish products, this project seeks to improve the livelihood of individuals both on the Gulf coast and in the aquaculture region of the state.

The original goals of the research were to improve the quality and safety of catfish and improve the utilization of catfish byproducts and underutilized marine species. Due to successes of the original project, subsequent efforts are focusing on additional uses of seafood and aquaculture foods by improving processing strategies and providing alternative products from waste materials. The project has thus expanded to include crab, shrimp, oysters, freshwater prawns, hybrid

striped bass, and crawfish. Because FDA has passed rulings affecting the potential viability of Mississippi seafood and aquaculture harvesters and processors, emphasis is placed on addressing possible adverse consequences resulting from these changes.

The work supported by this grant began in fiscal year 1990 when \$368,000 was appropriated for this project. The appropriations for fiscal years 1991-1993 were \$361,000 per year; fiscal year 1994, \$339,000; and fiscal years 1995-1996, \$305,000 each year. A total of \$2,400,000 has been appropriated.

The State of Mississippi contributed \$1,949 to this project in fiscal year 1991; \$41,286 in fiscal year 1992; \$67,072 in fiscal year 1993; \$91,215 in fiscal year 1994; and \$147,911 in fiscal year 1995. Product sales contributed \$7,044 in 1991, \$13,481 in 1992, and \$13,704 in 1993. Industry grants contributed \$14 in 1992 and \$31,796 in 1993. Other non-federal funds contributed \$80 in fiscal year 1991, \$838 in 1992, and \$17,823 in 1993. The total non-federal funds contributed to this project from 1991 through 1995 was \$434,213.

Research is being conducted by scientists in the Departments of Food Science and Technology and Agricultural Economics of the Mississippi Agricultural and Forestry Experiment Station at Mississippi State University and at the Coastal Research and Extension Center, Seafood Processing Laboratory, in Pascagoula, Mississippi. The principal investigators anticipate that research support through this grant will be needed through 1999.

SMALL FRUIT RESEARCH

The objectives of this grant are to improve the production and quality of small fruits in the Pacific Northwest through research on cold hardiness, breeding and genetics, and pest control. The principal researcher believes Washington, Oregon, and Idaho are important states for growing, processing, and marketing small fruits such as strawberries, blackberries, raspberries, grapes and cranberries. To remain competitive and expand markets, research is needed to help solve the myriad of problems that occur constantly.

The original goal of this project was to improve the production and quality of small fruits in the Pacific Northwest through research on cold hardiness, breeding and genetics, and pest control. Research progress to date for Oregon is the evaluation of new strawberry germplasm from Chile and North America for resistance to fruit rot, aphids, spider mites, and weevils; virus indexing of small fruit germplasm; better color stability of processed strawberries; increasing cranberry production through better weed control; and improving wine quality. Work is continuing in Washington on fruit physiology; cold hardiness of strawberries, grapes, and red raspberries; pest management of cranberries; and breeding of pest resistant strawberries. Idaho work continues on postharvest research for better marketability and adapting small fruit crops to high elevation growing conditions. For 1994, Oregon and Washington are jointly planning marketing studies to identify new market niches for berry crops and wines.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal year 1991 was \$125,000. The fiscal years 1992 and 1993 appropriation was \$187,000 per year, fiscal year 1994 was \$235,000, and fiscal years 1995-1996 are \$212,000 each year. A total of \$1,158,000 has been appropriated.

The nonfederal funds and sources provided for this grant were as follows: 1991, \$1,562,078 state appropriations, \$40,933 product sales, \$62,993 industry, \$357,266 other nonfederal; 1992, \$1,465,969 state appropriations, \$90,453 product sales, \$119,164 industry, \$287,976 other nonfederal; 1993, \$1,539,255 state appropriations, \$91,954 product sales, \$161,141 industry, \$416,712 other nonfederal; 1994, \$368,375 state appropriations, \$45,430 industry and \$90,822 other nonfederal, and \$1,185,249 for fiscal year 1995.

The research is being conducted at Oregon State University, Washington State University and the University of Idaho with Oregon State University as the lead university. The university researchers anticipate that work may be completed in fiscal year 2000.

SOUTHWEST CONSORTIUM FOR PLANT GENETICS AND WATER RESOURCES

New Mexico State University, Los Alamos National Laboratory, Texas Tech University, the University of Arizona and the University of California at Riverside entered into a cooperative interdisciplinary research agreement constituted as the Southwest Consortium on Plant Genetics and Water Resources to facilitate research relevant to arid and semi-arid land adaptation. The overall goal of the Consortium is to bring together multidisciplinary scientific teams to develop innovative advances in plant biotechnology and related areas to bear on agriculture and water use in arid and semi-arid regions. The principal researcher believes the Southwest Consortium for Plant Genetics and Water Resources is addressing the need for an integrated program that identifies specific problems of southwest agriculture, coordinates water and biotechnology research aimed at solving these problems, and facilitates the transfer of this information for commercialization. The specific research objectives of the Consortium include the development of crops with resistance to drought and temperature extremes, adverse soil conditions, pests and other parasites. The Consortium is also identifying technologies for improved water and nutrient delivery.

The original goals of this Consortium remains to facilitate research to provide solutions for arid and semi-arid crop adaptation. Five participating institutions have developed research plans consistent with the Consortium's goals. Subgrants are awarded competitively following peer review to support research that would solve problems unique to Southwest agriculture. Specific attention is given to interdisciplinary agricultural research. The Consortium discovered a gene that makes plants more resistant to water stress. They have also identified a genetic marker for salt tolerance and have compared a genetic system of wild plant species to domestic crops for differences in drought response. One research team has cloned a gene from alfalfa which controls an important biosynthetic pathway.

Another is working out the complex metabolism of salt tolerance in resistant plant types. Other teams have identified genes involved in pest resistance, herbicide tolerance and nutritional enhancement of arid-land forage.

Grants have been awarded from funds appropriated in the following years: fiscal year 1986, \$285,000; fiscal years 1987-1989, \$385,000 per year; fiscal year 1990, \$380,000; fiscal years 1991-1993, \$400,000 per year; fiscal year 1994, \$376,000; and fiscal years 1995-1996, \$338,000 each year. A total of \$4,072,000 has been appropriated.

The Consortium's host institution, New Mexico State University, reports matching non-federal funds of \$80,000 in state appropriations in 1992; \$100,000 in 1993; \$100,000 in 1994; \$100,000 in 1995; and \$100,000 estimated in state appropriations for 1996. These funds exist in the form of researchers' salaries, facilities, equipment maintenance and administrative support.

Research is being conducted by a consortium of institutions comprised of New Mexico State University, Los Alamos National Laboratory, Texas Tech University, University of Arizona, and University of California at Riverside. New Mexico State University is the lead institution in the consortium. This research is both basic and applied. Many of the objectives of this research have been met, many will be met in the future. Drought tolerance, pest management, and water utilization systems are constantly evolving, and as such require continuous research efforts. The competitive nature of Consortium Subgrants and the meeting of program emphasis on regional resource management is conducive to productive and relevant use of Federal Funding. Additional funds will be provided by state and other non-federal sources.

SOYBEAN CYST NEMATODE, MISSOURI

Research on soybean cyst nematode is focused on incorporating or enhancing high levels of resistance to the pest in soybean cultivars. Work has dealt mainly with identifying *Heterodera glycines*-resistance genes and incorporating them into agronomically superior cultivars. Basic study elucidated the fundamental biology of the cyst nematode in regard to new management strategies. Applied work dealt with evaluating production systems and techniques that optimize economic returns to producers on cyst nematode-infested land. The principal researcher believes that although this research is focused on the serious Soybean Cyst Nematode in Missouri, the problem has spread to several north central soybean states and thus, the results of this work have regional and national application.

The overall goal of this project was to develop new soybean cyst nematode-resistant soybean varieties in combination with development of effective new management strategies. It was found that the cyst nematode in northern Missouri produced one primary generation yearly compared with three to eight per year in southeastern states. Nematode-infected soybeans in controlled plots had decreased uptake of potassium and magnesium. Thus nematode-infected soybeans, when treated with high levels of these important minerals, may still be

able to produce economic returns to the grower. Several soybean lines having cyst nematode resistance have been identified and have potential for release. The soybean cultivar "Mustang", with resistance nematode races 3 and 13, and high seed yield, was released. approximately 100 cyst nematode-resistant lines were advanced to yield tests. Basic studies showed 29 DNA markers, and analyses began to identify those associated with resistance to races 1, 3, and 5.

Grants have been awarded from funds appropriated as follows: fiscal year 1979, \$150,000; fiscal years 1980-1981, \$250,000 per year; fiscal years 1982, \$240,000 per year; fiscal years 1983-1985, \$300,000; fiscal years 1986-1989, \$285,000; fiscal year 1990, \$281,000; fiscal year 1991 \$333,000; fiscal years 1992-1993, \$359,000 per year; fiscal year 1994, \$337,000; and fiscal years 1995-1996, \$303,000. A total of \$5,205,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$105,012 state appropriations, in 1991; \$84,368 state appropriations, in 1992; and \$168,017 state appropriations, in 1993; \$118,725 state appropriations in 1994, and \$33,498 state appropriations in 1995.

The research is being conducted at the Missouri -Agricultural Experiment Station. To more fully understand the biology of the pest and develop alternative cultivars and management strategies, the Missouri scientists estimate that the major objectives will be completed in fiscal years 1998-2000.

STEEP II - WATER QUALITY IN PACIFIC NORTHWEST

The STEEP II study was established in 1991 as a second phase of the tri-state STEEP Program entitled "Solutions to Environmental and Economic Problems," to meet the needs of farmers and ranchers in the Pacific Northwest in solving severe problems with soil erosion and water quality, while maintaining economically and environmentally sustainable agricultural production. The principal researcher believes the wheat-based agriculture in the Pacific Northwest contributes to the livelihood of thousands of people, who live and work in the three-state wheat region. It also contributes significantly to the national economy through large exports. The region's climate and soils are ideally suited for the production of wheat. Approximately 13 percent of the nation's production of this crop, about 300 million bushels annually, is grown on over 10 million cropland acres in Washington, Oregon, and Idaho. About 85% of the Pacific Northwest wheat is exported to Asian and Middle Eastern countries. Many crops grown in rotation with wheat also contribute to domestic and export sales. These crops include barley, canola, grass seed, lentils, peas, and potatoes.

However, the Pacific Northwest wheat region is subject to severe wind and water erosion, which has taken a heavy toll of the topsoil in a little more than 100 years of farming. Due to the hilly terrain, water erosion has reduced potential soil productivity in the high rainfall areas of the region by about 50 percent. Wind erosion has reduced productivity on the sandy soils in the lower rainfall areas. Also, off-site environmental costs of water erosion are large. Although many of these are difficult to measure, it includes damage from sediment to recreational

areas, roadways, and other areas which costs taxpayers millions of dollars annually. Wind erosion, which occurs mostly in the spring and fall, also can be costly and environmentally damaging, and causes increasing concerns for human health and safety from blowing dusts. Water quality degradation is of increasing concern in the agricultural areas of this region, since sediment is a major pollutant of surface water runoff which may contain varying amounts of chemicals. The complex hydrology of the region's landscape has made it difficult to identify the sources of these chemicals in surface and ground waters.

The primary goals are: to obtain and integrate new technical/scientific information on soils, crop plants, pests, energy, and farm profitability into sustainable, management systems; to develop tools for assessing the impacts of farming practices on soil erosion and water quality; and to disseminate conservation technology to the farm. The original STEEP program for erosion control, and the successor STEEP II program for erosion and water quality control, have provided growers a steady flow of information and technologies that have helped them meet economic, environmental, and resource conservation goals. Through the adoption of these technologies, wheat growers have been able to reduce soil erosion, improve water quality, and maintain or increase farm profitability. This has been accomplished through a tri-state, multi-disciplinary approach of basic and applied research and through technology transfer and on-farm testing to assist growers with applying these research findings on their farms. The on-farm testing program has been especially successful because growers are involved directly in the research and education effort. For example, the on-farm testing program has evaluated conservation options that growers can use to meet Farm Bill conservation compliance requirements.

STEEP programs have helped position farmers with new conservation technologies well in advance of deadlines to meet current and anticipated policy requirements. This preparation protects farmers against potential penalties and loss of government program benefits. The adoption of conservation practices by growers has been closely related with STEEP research and education programs. Although this supports the value of STEEP research, producers continue to have an urgent need for information to help them respond to new environmental and economic expectations in an evolving agricultural society.

The work supported by this grant began in fiscal year 1991, and the appropriations for fiscal years 1991-1993 are \$980,000 per year; in fiscal year 1994, \$921,000; in fiscal year 1995, \$829,000; and in fiscal year 1996, \$500,000. A total of \$5,190,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$938,812 state appropriations, \$63,954 product sales, \$156,656 industry, and \$16,994 miscellaneous in 1991; \$1,025,534 state appropriations, \$75,795 product sales, \$124,919 industry, and \$88,696 miscellaneous in 1992; \$962,921 state appropriations, \$62,776 product sales, \$177,109 industry and \$11,028 miscellaneous in 1993; \$1,069,396 state appropriations, \$46,582 product sales, \$169,628 industry, and \$22,697 miscellaneous in 1994; and \$1,013,562 state appropriations, \$31,314 industry, and \$107,151 miscellaneous in 1995.

The work under STEEP II will be done at laboratories and field research sites at the University of Idaho, Oregon State University, and Washington State University. Cooperative on-farm testing will be conducted in cooperation with growers on their fields in Idaho, Oregon and Washington. The original STEEP program was a 15-year program, initiated in 1975 and completed in 1991. The new STEEP II program was started in 1991 and will be completed in 1996. The new proposed five-year third phase, called STEEP III, will begin in 1996 and extend for five years.

SUNFLOWER INSECTS, NORTH DAKOTA

The North Dakota Agricultural Experiment Station continues to do short and long term research to manage key sunflower insects and to transfer new information for the management of pests to growers. The principal researcher believes the tri-states of North Dakota, South Dakota, and Minnesota comprise the major U.S. sunflower producing region, accounting for 85 percent of the nation's total harvested area in 1994. North Dakota alone has produced from 50 percent to 70 percent of the sunflowers grown in the United States since 1989. North Dakota growers identify insects as the primary problem for sunflower production. The North Dakota Sunflower Insects grant program thus serves as a national source of research information on sunflower insects.

The goal of this research has been to conduct short-term research to reduce the major yield losses due to sunflower insects and long-term research to refine the insect management approaches and develop sustainable insect management systems. For example, the 1994 grant developed trap cropping to control the red sunflower seed weevil. Traps of 8 to 16 rows of early flowering sunflower surrounding a large sunflower field were found to intercept many of the adult red sunflower seed weevils migrating into the field. While the weevils were in the trap rows they could be controlled with insecticides at a price which was about 1/10th the cost of treating the entire field with insecticide. The results gave insect damage and yield comparable to whole field treatment but at only 1/10th the cost. If insecticide usage for seed weevils reaches historical levels and if all fields are converted to trap fields, the potential annual savings for North Dakota growers could be \$4.2 million a year. Whereas there are assumptions associated with the \$4.2 million estimate, it does point out the tremendous benefit that may accrue with widespread adoption of seed weevil trap cropping. Research under the 1992 grant on red sunflower seed weevil also provided a large benefit to sunflower growers. The economic injury level for red sunflower seed weevil that was in use did not take into account oil loss and underestimated adult weevil reproduction. As a result red sunflower seed weevil damage had been underestimated. The new economic injury level developed is more accurate, and it was combined with an improved sampling system called sequential sampling. With these improvements farmers and consultants will be more accurate in predicting damage and more efficient in sampling.

Grants have been awarded from funds appropriated as follows: fiscal year 1982, \$72,000; fiscal year 1983, \$80,000; fiscal years 1984-1985, \$150,000 per year; fiscal years 1986-1989, \$190,000 per year; fiscal year 1990, \$188,000; fiscal

year 1991, \$194,000; fiscal years 1992-1993, \$200,000 per year; fiscal year 1994, \$141,000; and fiscal years 1995-1996, \$127,000 each year. A total of \$2,389,000 has been appropriated. Approximately 25 percent of the funds have been allocated to South Dakota in past years. In fiscal year 1994, North Dakota expended \$59,290 on this project, \$58,090 from state appropriated funds and \$1,200 from industry grants.

This research is underway at the North Dakota Agricultural Experiment Station. The current phase of this project is scheduled to end in late 1999.

SUSTAINABLE AGRICULTURE, MICHIGAN

The global objective of the 1996 project is to develop, and make available for farm application, technology for management of nutrients in high productivity agricultural operations and to document social, economic and environmental impacts resulting from adoption of these techniques in key areas of Michigan. The major components of this effort address compost integration, rotational grazing, cover crops, water table-nutrient contamination management and a summary of agroecological factors which guide farm decision-making. The principal researcher believes many animal and crop production systems are confined to small localized areas across the country. As a result, nutrients from organic and inorganic sources are concentrated and can cause substantial contamination of water. Water quality is especially vulnerable throughout the Midwest where these practices overlay aquifers. In Michigan alone, these areas are drained by more than 20,000 miles of slow-moving creeks and streams all emptying into the Great Lakes. Nutrients that make their way into groundwater must be reduced to levels that maintain an ecologically and socially acceptable equilibrium. Systems approaches to nutrient management and adoption of new technologies are needed to reduce environmental loading from agricultural land. This project is developing methods for containment of nutrients at high yield levels.

The goal of this project is to bring together the technical, social and environmental elements necessary for farmers to adopt animal, soil and plant management practices which efficiently utilize and contain nutrients on-the-farm. Michigan farmers are rapidly becoming leaders in rotational grazing throughout the Great Lakes Basin, largely as a result of momentum created by this project. There are 27 local grazing networks in Michigan alone, which sponsor a region-wide grazing conference each February. The Michigan Composting Council has grown during the past two years as a major outlet for the compost production and land application technologies being developed. Michigan is a leader in cover crop technologies for farm application, with its Wheat 2000 production program. Using results from cover crop research, leaching of nitrogen, has been reduced from 70 pounds per acre per year to less than 35 pounds, with no reduction in corn yield.

The work supported by this grant began in fiscal year 1994 with an appropriation of \$494,000. Fiscal years 1995-1996 appropriation is \$445,000 for a total of \$1,384,000. The matching funds dedicated to this research includes

updates state funds in the amount of \$511,900 in fiscal year 1994; \$372,319 for fiscal year 1995; and \$359,679 for fiscal year 1996.

Research is being conducted by Michigan State University at multiple locations. Field locations for the study include university experimental sites and numerous operating farms across the state. At the Kellogg Biological Station, the Living Field Laboratory was established in 1994, and is an essential resource for achieving long-term objectives, including studies of compost integration, rotational grazing and the use of cover crops. Other research will include: Rotational grazing at the Lake City and Upper Peninsula Experiment Stations; Water table management studies at the Fennville Research Station; and additional sites near Breedsville, Saignaw and Paw. Numerous farmer-field-collaborative studies are being conducted in collaboration with the Michigan Agricultural Stewardship Association and public sector agencies.

The university researchers now state that this is a long-term initiative and that the overall goals and objectives will not be completed until approximately the end of fiscal 1999. Various phases of the work such as compost production research and agroecology definition will be completed during 1996 and 1997.

SUSTAINABLE AGRICULTURE AND NATURAL RESOURCES, PENNSYLVANIA

Environmental quality degradation is a major concern of agricultural production near urban areas, especially with regard to pest management and pesticide use, nutrient loading of soils and water associated with chemical fertilizers and animal and poultry manures. Individuals and families living in these urbanizing areas are organizing themselves to deal with these issues and are asking that better measures of environmental quality be developed. Intensive animal production agriculture results in large quantities of manure, often in excess of the capability of the land to safely accept such quantities, especially where large amounts of purchased feeds are brought onto the farm. Composting of manures along with non-organic carbon-containing materials is thought to be one possible method of managing these materials. If composting is to be successfully used, the farmer must understand the nutrient cycling process among crop, soil, and aqueous environments, and develop appropriate soil and crop health measures. Sub-projects were developed collaboratively by The Pennsylvania State University and Rodale Institute scientists in response to a "request for proposals." The proposals were peer reviewed by Penn State, Rodale, and other USDA scientists out of the four projects receiving high ratings from the reviewers, two were directed to develop soil health and crop management indices and guidelines, one was directed to develop biological control of major apple insects; and the remaining project focused on how people in urban areas of Pennsylvania are organizing themselves to deal with perceived environmental issues associated with farming.

The principal researcher believes this research is directed towards problems important to Pennsylvania Agricultural producers and to other northeastern states. The knowledge developed will have wide applicability because it represents quality scientific research and technology development. Because of their concern and

interest in these problems, Pennsylvania farmers will be the first to take advantage of the new knowledge developed by the Sustainable Agricultural and Natural Resources Project.

The project was initiated in 1993. The nutrient cycling studies developed in the first three years will be integrated into cropping systems studies in 1996 and 1997. A major challenge in eastern agriculture is the development and evaluation of rotational sequences that allow farms to be economically viable while protecting water quality through nutrient cycling from crop to crop and year to year rather than permitting nutrient runoff into surface water or downward percolation into groundwater. Successful rotational systems developed under this research will protect the environment as well as the farmers profitability.

The work supported by this grant began in fiscal year 1993. The appropriation for fiscal year 1993 was \$100,000, and \$94,000 per year in fiscal years 1994, 1995 and 1996 for a total of \$382,000. A total of \$95,420 in matching support from university, state and private industry sources was provided in fiscal year 1995.

Research will be conducted by The Pennsylvania State University and with cooperators throughout Pennsylvania. Projects supported by fiscal 1995 funds will be completed in 1997. The completion date for fiscal 1996 projects will not be known until the project is peer reviewed and approved by CSREES.

SUSTAINABLE AGRICULTURE SYSTEMS, NEBRASKA

This research builds on the work begun in 1992 with the global objective of investigating and developing management strategies to increase the biological and economic efficiency of farming systems that integrate cropping and livestock production on a farm or in a watershed. This strategy is consistent with our emerging awareness and concern in USDA that many of the processes that will help us sustain our system of food and fiber production requiring a broader focus. The Natural Resource Conservation Service--NRCS--and land-grant research institutions are increasingly focused on whole farm models and ways to study and promote efficient resource management at the watershed level. This project integrates five departments at the University of Nebraska in designing crop/animal production systems that will contribute to better use of resources such as manure and crop residues, and will improve water quality in agricultural areas as well as adjacent urban developments.

The principal researcher believes this research has immediate local applications as well as broader regional implications. Concentrated livestock feedlots are an important part of Nebraska's economy, and animal manure that used to be considered a key resource for building soil fertility is now often seen as an expensive waste problem. This project is developing a composting process to return needed nutrients to cropping fields with minimum loss of value. It is also dispersing livestock across cool and warm season grass pastures and crop residues in the fall and winter to minimize the problem of concentrated feedlot manure.

The cropping systems under investigation bring diversity in crops and patterns to reduce soil loss on highly erodible fields and minimize chemical and fertilizer loss to streams. The strategy is to reduce fossil-fuel derived production inputs by building on ecological processes in the design of rotations and spatially diverse cropping systems. This has implications for the midwest region wherever soil erosion from croplands and concentrated livestock numbers are problematic and where farmers are seeking innovative solutions from the agricultural research community.

To address the overall objective of an integrated sustainable crop/animal system, the Integrated Farm project was established at the Agricultural Research and Development Center of the University of Nebraska - Lincoln. A team of 15 researchers from several departments helped in the design, implementation, and demonstration of research activities at the Integrated Farm. Scientists are learning the benefits of looking at farming system holistically, and farmer consultants have been an integral part of the design of experiments and interpretation of results. Many farmers who have visited the Center have contributed ideas to the research, as well as taken away new concepts to adapt to their own conditions. There are on-farm, outreach activities that have been stimulated by some of the research at the Center. Some of the major findings have included a better understanding of grazing crop residues in conventional and ridge tillage corn planting systems, better cattle gains and less corn stalk loss in conventional tillage, the effects of windbreaks on cattle grazing corn and sorghum residues in the winter, windbreaks have no consistent effect on rate of gain in Nebraska, minimal impact on rate of gain, the potential contributions of compost for providing nutrients to a whole farm--about one third of the nitrogen and three quarters of the phosphorus can come from compost on this farm--, and reduced erosion with contour strip cropping and rotation of different crops on hillsides.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$70,000 per year, \$66,000 for fiscal year 1994, and \$59,000 for fiscal years 1995-1996 each year. A total of \$324,000 has been appropriated.

The matching funds dedicated to this research includes state funds in the amount of \$25,313 in fiscal year 1992, \$26,384 in fiscal year 1993, \$27,306 in fiscal year 1994, and \$36,091 in fiscal year 1995. A total of \$146,094 has been provided in state funds as formal match on the proposals. This figure vastly underestimates the total state contribution to the research, demonstration, and educational activities that have been catalyzed by the Integrated Farm Project. This has been a highly effective tool to leverage faculty and student time from several departments into more interdisciplinary work. The actual research investments from the departments and the Agricultural Research Division in Nebraska have been several times the amount of the Federal grant.

Research is being conducted by the University of Nebraska at five locations across the state. The current major focus of this project is at the Agricultural Research and Development Center near Mead, in eastern Nebraska. The university researchers anticipate that the first phase of the planned project will be

completed in fiscal year 1996. Much has been accomplished by having a full-time coordinator running the day to day activities of the Integrated Farm. They are just beginning to have a major impact on the overall research agenda of the University of Nebraska. The researchers are planning a follow-up project that will better integrate the economic and environmental dimensions of this work, and extend the outreach of the research to other nearby sites and begin to address social issues that are important in adoption of these practices in an entire watershed.

TILLAGE, SILVICULTURE AND WASTE MANAGEMENT, LOUISIANA

This research has five components: Rice and Cotton Tillage, Dairy and Poultry Waste Management, and Bald Cypress Silviculture. More specifically, the Rice scientists are looking for ways to improve stand establishment, the Cotton scientists are focusing on the use of tillage systems to combat harmful insect populations; the Waste Management Scientist are quantifying the environmental and economic effectiveness of approved dairy and poultry waste disposal systems; and the Silviculturist are conducting a problem analysis of Louisiana's Bald Cypress forest. The principal researcher believes that since the crops, forest and waste issues extend beyond the borders of Louisiana, this research has regional application. Moreover, this research supports the Departmental Integrated Pest Management Initiative, and responds to waste management problems associated with the poultry and dairy industries' move to large confinement facilities.

The original goals were to: improve conservation tillage in rice and cotton production, to determine the effectiveness of no-discharge dairy waste treatment facilities, to determine permissible poultry litter land-treatment rates, and to evaluate wetland forest regeneration problems. All components of the project have established research studies, and are monitoring progress. Each year the principal investigator initiates a review of the sub-projects, and in this fashion is encouraging good dialogue and cooperation among the sub-project investigators and their respective departments. For instance, Louisiana State University's Poultry and Forestry Scientist are working closely to establish application rates and procedures for applying poultry waste to forest plantations.

The work began in FY 1994. The appropriation for FY 1994 was \$235,000, FY 1995 - \$212,000, and FY 1996 - \$212,000. This totals \$659,000. State funding in support of these areas of research exceeds \$750,000 annually.

Investigations are being conducted on the main campus at Louisiana State University as well as the Experiment Stations at Calhoun and Washington Parish, LA. Work has been planned through 1999.

TROPICAL AND SUBTROPICAL RESEARCH

Cooperative State Research, Education, and Extension Service is operating the program in cooperation with the Caribbean Basin Administrative Group--CBAG and the Pacific Basin Administrative Group--PBAG. State Agricultural Experiment Stations that are members of CBAG are Florida, Puerto Rico, and the

Virgin Islands; members of PBAG are Hawaii and Guam. Non-member institutional interests are represented by the Executive Director of the Southern Region Agricultural Experiment Station Directors, who is a member of CBAG, and the Executive Director of the Western Region Agricultural Experiment Station Directors, who is a member of PBAG. The Agricultural Research Service--ARS--also has representation on CBAG and PBAG. Additionally, the USDA/CSREES officers are assigned with Tropical and Subtropical Agriculture Research--T-STAR--program supervision as active participants. Funds for the program are divided equally between the two Basin Administrative Groups. The research objective of the program is to improve the agricultural productivity of many of the subtropical and tropical parts of the United States. Special research grants have been awarded competitively using a peer review process for research on controlling insect, disease and weed pests of crops, increasing the production and quality of tropical fruits, vegetables and agronomic crops, promoting increased beef production through development of superior pastures, detection of heartwater disease of cattle and the influence of heat stress on dairy cattle reproduction using land and water resources more effectively, developing computer models for efficient crop production systems and animal feeding systems, developing computer models for land-use decisions, using biotechnology methodologies for improving plant resistance to viral and bacterial diseases, using biotechnology to develop non-chemical, biological strategies for controlling insect pests; and growing new speciality crops.

The principal researcher believes the national need of the T-STA program is to provide research-generated knowledge that enables decision-makers to make informed choices in the responsible use of natural resources, facilitates the health and well-being of American citizens through improved food safety and nutrition, provides frontline protection for the rest of the nation's farms and ranches from serious plant and animal diseases and pests, and enhances the ability of U.S. farmers to produce crops efficiently and economically and/or to introduce new crops and agricultural products with export potential to gain market share abroad. On a regional basis, the T-STAR program addresses the unique challenges of practicing tropical agriculture--e.g., presence of pests year-round, heat stress, post-harvest processing to meet regulatory requirements for export, etc. The local need of Americans living in tropical regions of the nation for T-STAR knowledge-based products to design and implement sustainable agricultural development within fragile tropical agroecosystems--particularly on tropical islands--and to develop new crops and niche markets.

The original goal of this research was to increase the production and quality of tropical crops; control pests and diseases of plants and animals; promote increased beef production and conserve land and water resources. In fiscal year 1995, 36 CBAG grants were supported. Examples of research being funded are control strategies for Melon thrips; the biochemical nature of resistance to rust in nutsedge; development of bioherbicides for nutsedges; development of tomato cultivars with resistance to the spotted wilt virus; development of pheromones for monitoring and controlling the citrus root weevil, reducing the effects of heat stress in dairy cattle, developing a decision support system for vegetable production; finding cucurbits with resistance to silverleaf, developing a computer

program for optimal supplementation strategies for beef and dairy cattle on tropical pastures, characterizing new strains of citrus tristeza virus in the Caribbean basin, determining the economic threshold for the citrus leaf miner on limes, using viral replicase genes to engineer rapid detection methods for geminiviruses, developing makers of bacterial spot resistance genes in tomato, breeding snap and kidney beans for resistance to golden mosaic virus and for heat tolerance, searching for resistance to papaya bunchy top disease, developing weed controls for yam production, and bioengineering ringspot virus resistance in papaya.

The operation of the tropical and subtropical research program was transferred from ARS to CSREES, with CSREES funding being first provided in fiscal year 1983. Funds in the amount of \$2,980,000 per year were appropriated in fiscal year 1983 and 1984. In fiscal year 1985, \$3,250,000 was appropriated. In fiscal years 1986, 1987, and 1988, \$3,091,000 was appropriated each year. \$3,341,000 was appropriated in fiscal year 1989. The fiscal year 1990 appropriation was \$3,299,000. The fiscal years 1991-1993 appropriations were \$3,320,000 per year; \$3,121,000 in fiscal year 1994; and \$2,809,000 in fiscal years 1995-1996 each year. A total of \$43,822,000 has been appropriated.

For fiscal year 1995, approximately \$1 million of nonfederal funds were provided to the T-STAR program from state appropriations in PBAG. These state funds were in the form of faculty salary time commitments and indirect costs covered by PBAG institutions.

This research is being conducted in Florida, Puerto Rico, Virgin Islands, Hawaii, and Guam. Most of the projects are from 2 to 3 years in duration.

URBAN PESTS, GEORGIA

This research is focused on urban pests with specific emphasis on termites and ants. The principal researcher believes subterranean termites and ants are significant economic pests in the southeastern United States. Damage and control costs for termites in Georgia were estimated at \$44.5 million in 1993. It is estimated that Professional Pest Control Operators apply over 23 million pounds of active ingredient in and around homes each year. Chemicals currently registered for controlling these pests are less efficacious than desired and applied at an intensity that exceeds most agricultural settings.

The goal of the termite research is to better understand the foraging activities of subterranean termites and their responses to selected environmental cues in order to tailor monitoring and predictive strategies with efficacious conventional and alternative methods of control. Specific accomplishments in the subterranean termite research are as follows: Sixty colonies of subterranean termites have been located and identified in selected habitats and soils in Georgia. These colonies are being used to map foraging territories, estimate foraging populations, quantify wood consumption rates, and define determinants of feeding site selection. The data will be utilized in developing predictive models of seasonal occurrence and movement of termite foragers and colonies and in choosing appropriate baits as well as their timing and location of placement for monitoring

and control tools; five species of subterranean termites identified in Georgia are probably from one species which can interbreed despite the genetic isolation mechanisms. These 5 "species" exhibit differences in feeding and foraging behaviors; subterranean termite colonies in Georgia are less than 500,000 termites per colony and are characteristically smaller than those in Florida and Canada, but are within the same size range of those in Mississippi. It is believed that colonies of subterranean termites are nonindigenous to Florida and Canada and are not subject to the same competitive interactions as those colonies that are native to Georgia and Mississippi. However, structures attacked by subterranean termites in Georgia are often attacked by more than one distinct colony; new chemistry soil termiticides research has demonstrated the utility of several compounds with low mammalian toxicity, high target specificity, and longer residual activity than currently registered termiticides. Bioassays of entomogenous fungi against termite workers have demonstrated the repellency and killing potential of several strains of the fungus *Metarhizium anisopliae*; studies with termite baits have demonstrated the seasonality of termite feeding activity and behavior impacts the timing of application and the time frame for expected results from termite baiting; preliminary work indicates that subterranean termites do not respire for several hours each day. This information has implications for the control of termites using fumigation techniques. Argentine ants research has focused on seasonal food preferences and baiting tactics for their management. Placement of commercial baiting stations about the outside periphery of buildings has proven effective in preventing infestations in apartment complexes and reducing ant complaints by residents.

The research supported by this grant began in fiscal year 1991, and the appropriation for fiscal years 1991-1993 was \$76,000 per year. In fiscal year 1994 the appropriation was \$71,000, and in fiscal years 1995-1996 the appropriation was \$64,000 each year. A total of \$427,000 has been appropriated. The non-federal funds and sources provided for this grant by fiscal year were as follows: 1991 - none, 1992 - \$26,000, 1993 - \$18,000, 1994 - \$59,530 and 1995 - \$59,539.

This research and technology transfer is being conducted at the Georgia Agricultural Experiment Station in Griffin, Georgia. The current objectives on termites and ants will require a minimum of one additional year to complete.

VITICULTURE CONSORTIUM

The research proposals for the University of California and Cornell University--New York--on viticulture address regional and national needs such as rootstock/scion interactions, resistance to phylloxera, nutrition, soil management, harvesting and processing qualities. The goal is to help the viticulture industry become more competitive in the global market by increasing production efficiencies.

Fiscal year 1996 is the first year in which funds have been made available for this research. The appropriation for fiscal year 1996 is \$500,000. CSREES has been working very closely with the viticulture and enology industry. The

grape and wine industry has pledged to match the funds available for this research through the Consortium institutions.

The work will be carried out in several states in the country. The Consortium institutions are in the process of evaluating work to be done in their regions. The proposed research addresses work to be done in 1996. Therefore, the researchers anticipate that their work will be completed within the funded period ending in 1997.

WATER QUALITY

The Cooperative State Research, Education, and Extension Service continues support of the national, competitively-awarded Special Research grants program in Water Quality as part of the Department of Agriculture's Water Quality Initiative. This program supports research to investigate the impacts of non-point source pollution from agriculture on water quality, and to develop improved, sustainable agricultural practices and systems that protect the environment and are economically profitable. Also, this program supports research on five Management Systems Evaluation Areas as part of the Midwest Initiative on Water Quality to develop new farming systems that protect water quality, with research located at 10 sites throughout the Corn Belt. This program is conducted jointly with the State Agricultural Experiment Stations. Agricultural Research Service, U.S. Environmental Protection Agency, U.S. Geological Survey, Natural Resources Conservation Service. Extension specialists and other Federal, state, and local agencies. The Water Quality grants have supported 214 research projects across the country. In fiscal year 1994, the request for proposals in the Water Quality Special Research Grants Program resulted in 107 grant proposals received. Due to limited funds, only five proposals were selected for awards by the peer review panels. In addition, four water quality research grants were awarded jointly with the Sustainable Agriculture Research and Education Program, and funds were awarded to the five Management Systems Evaluation Areas projects in the Midwest to continue the water quality systems research started in 1990. A total of 14 grants were made with awards ranging from \$150,000 to 400,000 for a funding period up to three years.

For the fiscal year 1996 Special Grants Program in Water Quality thirty-five proposals were received and eight awards were made. A complementary program in "Water Resources Assessment and Protection" is also being conducted under the Cooperative State Research, Education and Extension Service's National Research Initiative Competitive Grants Program in fiscal year 1996. The principal researcher believes concerns have been raised by the public about the possible risks to the environment and soil and water quality by the use of agricultural chemicals. Better methods of detection of very minor amounts of chemicals in water have made the public, farmers, and policymakers more concerned about use and management of these agricultural chemicals and wastes, while meeting the challenge of maintaining the efficiency and productivity of agricultural production systems. Water quality continues to be of high priority at local, regional and national levels. Results from the research is providing technologies to reduce

pollutants, guidelines for site-specific farming and improved farming systems. The principal researcher believes this research to be of national, regional or local need.

The original goals of the Cooperative State Research, Education and Extension Service Special Research Grants Program in Water Quality were to determine the extent to which agriculture has impacted groundwater quality, and to develop new and improved and cost-effective agricultural systems that enhance ground and surface water quality. Major progress has already been made on these goals. Examples of some of the results of recently completed research include the following:

1. Research in the San Joaquin Valley has shown that subsurface drip irrigation will result in less drain water disposal and provide higher water use efficiencies than surface irrigation. This will reduce drainage waters, and associated salt and agricultural chemical loadings.
2. The injection of corn and soybean oil around a well is an effective method for nitrate removal. Nitrate in the water is removed as a larger number of denitrifiers utilize the oil as a carbon source.
3. Runoff losses of herbicides can be reduced by 20 to 30 percent during the first two weeks after application, with controlled shallow water tables. This technique increases the value of subsurface drainage systems.
4. Several deep-rooted alfalfa varieties have been identified; they remove nitrates from the soil more efficiently than reed canarygrass or switchgrass.
5. Fluidized bed and fly ash wastes from power plants applied to high-phosphorus soils substantially reduced the water-extractable phosphorus; application of these materials to critical areas may substantially reduce the export of dissolved phosphorus to streams.

The work under the Water Quality Program began in fiscal year 1990 with an appropriation of \$6,615,000. The fiscal year 1991 appropriation was \$8,000,000; the fiscal year 1992 appropriation was \$9,000,000; the fiscal year 1993 appropriation was \$8,950,000; the fiscal year 1994 appropriation was \$4,230,000; and fiscal years 1995 and 1996 appropriation is \$2,757,000 each year. A total of \$35,694,000 has been appropriated for Special Research Grants on water quality.

The non-federal funds in support of the Water Quality program, provided by state appropriations, industry, product sales and other local sources, have averaged approximately \$1,000,000 per year since the program began. In addition, substantial support has been provided by other federal agencies.

The awards under the national competitively-selected Water Quality Special Research Grants Program have been made in almost every State. Work is being carried out in all parts of the country. The Management Systems Evaluation Areas of the Midwest Initiative on Water Quality are headquartered in Iowa,

Minnesota, Missouri, Nebraska, and Ohio with satellite locations in North Dakota, South Dakota, and Wisconsin. Two new projects are located in Indiana and North Carolina.

The researchers funded under the Water Quality Special Grants Program have produced significant progress on improved understanding of the impacts of agricultural practices on surface and ground water pollution, and in developing improved agricultural systems that are sustainable both economically and environmentally. Implementation of some of these recommended new practices is already underway in a number of states. The focus over the next five years will be on developing and implementing farming systems that utilize the results from the past water quality research. The March 1995 Water Quality Users Conference brought together research findings and new technologies that have been developed. The research over the next five years will emphasize development of production systems that are economical and efficient in use of resources and friendly to the environment.

WATER CONSERVATION, KANSAS

This research program is designed to develop and disseminate technical and economic information on the efficient use of water for irrigated crop production in western Kansas. The following objectives comprise this program for the fourth year of the project and are identical to the objectives for the first three years which are proposed to:

1. estimate the longevity of subsurface drip irrigation systems in the Central Great Plains using calculations of annual system performance deterioration based on nine years of operating pressures and flow rates;
2. develop efficient irrigation management procedures for subsurface drip irrigation systems for corn;
3. estimate and compare the costs and returns from using alternative irrigation systems, including center pivot, gated pipe, drip, and LEPA, for the major irrigated crops in western Kansas; and
4. increase the availability of irrigation research information and best management practice recommendations to Kansas irrigators through a series of extension bulletins and updates based on research-based information.

The third year of an advanced study was conducted at Colby to evaluate the water use efficiency of high frequency deficit subsurface drip irrigation for corn production. The 1994 and 1995 results indicate that corn yields can be maintained at a level nearly equal to fully irrigated crop production at significantly lower water inputs when daily deficit irrigation is used. Tensiometer and neutron probe water content data was collected in an experiment examining the need for late-season irrigation for corn production. This experiment will be continued in 1996.

The principal researcher believes corn is the principal irrigated crop in Kansas and throughout the Great Plains. This research will be of significance within the State and region.

The research goal is to determine the feasibility of drip irrigation in western Kansas to sustain irrigated corn production to support the beef feedlot industry. The project also supports an educational effort through collection and dissemination of information on efficient irrigation methods. The project has a significant and active technology transfer and extension program. Three papers reporting research results from the project were presented at the Fifth International Microirrigation Congress. Six extension publications have been published and six more are under editorial review prior to publication.

The computer program, Irrigation Economics Evaluation System, is currently in the testing phase prior to release for public use. The work supported by this grant began in fiscal year 1993 with an appropriation of \$94,000; \$88,000 in fiscal year 1994; and \$79,000 in fiscal years 1995-1996 each year. The total funds appropriated are \$340,000.

The non-federal funds and sources provided for this grant were as follows: \$781,232 state appropriations, \$55,205 product sales, \$60,907 industry and miscellaneous in 1991; \$868,408 state appropriations, \$37,543 product sales, \$35,484 industry and miscellaneous in 1992; \$833,324 state appropriations, \$54,964 product sales, \$144,225 industry and miscellaneous in 1993. Amounts for other fiscal years are not available.

The research is being conducted at Kansas State University. The field portion of the research is being conducted on Experiment Stations at Colby and Garden City, Kansas. The university researchers have projected five years of data collection with completion of the project in 1998.

WHEAT GENETICS, KANSAS

This project provides partial support for the Wheat Genetics Resource Center at the University of Kansas, which focuses on collection, evaluation, maintenance and distribution of exotic wheat related germplasm needed to develop new wheat cultivar resistant to disease, insects and environmental stress. This project represents Federal contribution toward a Kansas program which is important nationally and internationally. The principal researcher believes most cultivated varieties of wheat are derived from common sources. They lack the rich genetic diversity needed to develop resistance to diseases, insects and environmental stress. The replacement of genetically rich primitive cultivar and land races by modern, more uniform cultivars all over the world is causing erosion of wheat germplasm resources. New pests or those that have overcome varietal resistance pose a constant threat to the nations wheat production. Genetic resistance often resides in wild relatives of wheat. This program which was established in Kansas is providing service to wheat breeders nationwide.

The original goal of this research was to enhance the genetic diversity available to wheat breeders nationally and internationally by collecting, evaluating, maintaining and distributing germplasm derived from wild relatives of wheat. To date 25 germplasm releases have been made containing new genes for resistance to such pests as Hessian fly, greenbug, leaf rust, soilborne mosaic virus and Russian wheat aphid. Germplasm stocks with resistance to leaf rust and powdery mildew are under development. Evaluation of germplasm for important resistance genes was carried out by Center scientists and cooperating institutions. The Center filled 30 requests from U.S. wheat breeders for seed from the germplasm collection and 57 requests for seed of germplasm releases, as well as large numbers from international breeders.

Work supported by this grant began in fiscal year 1989. Appropriations were for fiscal year 1989, \$100,000; fiscal year 1990, \$99,000; fiscal year 1991, \$149,000; fiscal years 1992-1993, \$159,000 per year; fiscal year 1994, \$196,000; and fiscal years 1995-1996, \$176,000 each year. A total of \$1,214,000 has been appropriated.

The nonfederal funds provided for this grant were as follows: \$493,285 state appropriations, \$31,414 product sales, and \$84,610, other non-federal in 1991; \$414,822 state appropriations, \$14,259 product sales, and \$102,086 other non-federal in 1992; and \$533,848 state appropriations, \$32,297 product sales, and \$163,937 non-federal in 1993, \$468,960 in 1994; and non-federal funding for 1995 was \$563,671.

This research is being conducted at Kansas State University by the Wheat Genetics Resource Center. Although this project is approved on a year to year basis, the need for genetic enhancement is indefinite. The current phase of the program is projected to go through 1998.

WOOD UTILIZATION RESEARCH

This research is generating the new knowledge and technologies needed to maintain a vigorous, competitive, domestic forest industry which will help achieve sustainable forests through these improved utilization practices. The program includes: meeting environmental objectives in timber harvesting and forest products manufacture; extending the timber resource through research, including management; exploiting pesticides developed from forest trees; wood machining; introducing small forest products industries to wood technology; and developing new products from wood and recycled materials. The principal researcher believes this program is national in scope. Four of the Centers are established to improve the utilization of those forest species that grow in these regions, i.e. western conifers, southern pines, Lake States hardwoods, and northeastern forests. The other two locations are working in specific subdisciplines, i.e. machining of wood and incubator technology transfer. The wood machining work at North Carolina State University is applicable to wood machining nationally and even internationally.

The original goal was to establish three centers of excellence in wood utilization to generate new knowledge that would benefit the forest industry nationwide. The original goal has been fine-tuned to place additional emphasis on environment stewardship, resource extension, technology transfer, and scientist education. Research that extends the resource reduces the impact of forest operations on the ecosystem. For example, Oregon State researchers estimate that a one percent increase in the efficiency in plywood production in Oregon mills translates into 8,000 trees, 80 feet tall and 20 inches in diameter, which do not have to be cut. Over the life of this grant, plywood mills have increased their efficiency over 10 percent. That equates to saving 80,000 trees annually without decreasing the amount of plywood produced. In addition, the consumer benefits from the more efficient production. Installation of quality control procedures has been documented to save \$200,000 in one mill and \$300,000 in a second. Hand held calculator programs developed by this research have resulted in savings of nearly \$1,000,000 to woodworkers. Reduction in costs related to cleanup of superfund sites are estimated as tenfold due to the use of better methods developed by research. Water quality has improved due to the introduction of bacteria that consume polychlorinated phenols in contaminated water sources. Laser cutting of wood may revolutionize the cut-up technology for furniture plants resulting in impressive savings in raw materials. Savings in using evolving laser systems have been verified. System analysis of sawmill operations has allowed managers to improve the efficiencies of operation. The application of modern wooden bridge technology may provide local highway agencies with the opportunity to replace the thousands of hazardous bridges at costs far below concrete or steel bridges on secondary highways. These are but a few examples of benefits from continuing research in wood utilization. Each of these units has an advisory committee that establishes priorities and peer reviews research proposals.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$3,000,000; fiscal years 1986 through 1989, \$2,852,000 per year; fiscal year 1990, \$2,816,000; fiscal years 1991 and 1992, \$2,852,000 per year; fiscal year 1993, \$4,153,000; fiscal year 1994, \$4,176,000; and fiscal year 1995-1996, \$3,758,000 each year. A total of \$38,773,000 has been appropriated.

Mississippi State University non-federal funds were: State appropriations 2,498,800, 2,178,725, 2,353,225, 233,691, and \$399,309 for 1991, 1992, 1993, 1994, and 1995, respectively. In addition, industry funds averaged 781,800 for those five years in support of Mississippi's research. Oregon State University state appropriations were: \$1,337,962, \$1,394,304, \$1,256,750, \$1,252,750, and 1,417,755 for 1991, 1992, 1993, 1994, and 1995 respectively. Estimated non-public support averages \$500,000 per year. Michigan State University non-federal contributions for 1994 totaled \$910,481; and \$942,200 for 1995. Three new locations were added in 1994: University of Minnesota - Duluth non-federal match was \$590,000 for 1994, \$550,000 for 1995, and \$560,000 for 1996. North Carolina State University was \$126,000 for 1994 and \$165,000 for 1995; and the University of Maine was \$600,000 for 1994 and \$445,723 for 1995. The Federal funds are leveraged approximately two to one.

There are six locations. The initial three - Oregon State University, Mississippi State University, and Michigan State University were joined by the University of Minnesota - Duluth, North Carolina State University, and the University of Maine in fiscal year 1994.

The research needs are continuously evolving. Each additional withdrawal of forest land for non-timber use puts additional pressure on the forest resource and creates additional opportunities for more efficient utilization and more recycling. Each institution provides its region with a spectrum of research missions and; therefore, the program continually changes as new products, processes, environmental concerns, and consumer needs change. Each program maintains a priority list of needs. Scientific advances in the basic sciences, wherever they occur, lead to additional opportunities in wood utilization at these centers. As long as science in general is advancing, there will be additional opportunities for wood utilization research.

WOOL RESEARCH

The overall goals for this research are the development of objective measures of wool, mohair, cashmere and other animal fibers to increase profitability of the sheep and Angora goat industries. Specific objectives include: develop and evaluate measurement techniques for rapid objective evaluation of wool, mohair, cashmere and other animal fibers; increase the use of objective measurements to increase fiber production, quality, and income to producers; and increase consumer acceptance of wool fabrics. The principal researcher believes collaboration exists among researchers in Texas, Wyoming and Montana associated with this grant and other Federal, university and industry scientists on a wide basis to assure responsiveness to the needs of those involved in wool and mohair production, marketing and processing.

The overall goal for this research to develop objective measures of wool, mohair, cashmere and other animal fibers to increase profitability of the sheep and Angora goat industries remains the primary emphasis of the research. Computer software programs for the automatic image analysis system are being evaluated and improved for the purpose of measuring the average diameter and distribution of animal fibers. Software is also being modified to permit rapid, accurate measurement of other fiber properties such as fiber style crimp and character. Near infra red reflectance analysis was compared to standard practices for yield measurement of mohair. Progress was again made to improve the quantity and quality of fibers produced from sheep and goats. Selection and crossbreeding experiments, part of a national long-term genetic selection study conducted at the University of California, Davis, Texas A&M University, Montana State University, and the U.S. Sheep Station in Dubois, Idaho, were conducted to evaluate wool characteristics, reproduction, and lamb quantity and quality of crosses between Merino and Rambouillet breeds. Correlation studies were completed to compare the measurements made by the laser scan image analyzer with those made by microprojection. Numerous scientific and technical papers were published during the past year.

Grants have been awarded from appropriated funds in the amount of \$150,000 for fiscal years 1984-1985; \$142,000 per year for fiscal years 1986-1989; \$144,000 for fiscal year 1990; \$198,000 for fiscal year 1991; \$250,000 per year for fiscal years 1992-1993; fiscal year 1994, \$235,000; and fiscal years 1995-1996, \$212,000 each year. A total of \$2,369,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$150,913 state appropriations, \$11,800 product sales, \$5,817 industry, and \$3,556 miscellaneous in 1991; \$111,394 state appropriations, \$25,451 product sales, \$41,442 industry, \$3,068 miscellaneous in 1992; \$152,699 state appropriations, \$39,443 product sales, \$40,804 industry, and \$3,556 miscellaneous in 1993; \$150,094 state appropriations, \$35,284 product sales, \$36,484 industry, and \$3,556 miscellaneous in 1994; and \$67,345 state appropriations, \$10,000 product sales, and \$34,325 industry contributions in 1995.

The research is in progress at the Texas A&M University, Texas Agricultural Experiment Station, the University of Wyoming, and Montana State University. It is anticipated that five years will be required to complete the current research.

AGRICULTURAL DEVELOPMENT IN THE AMERICAN PACIFIC

The Agricultural Development in the American Pacific--ADAP--project is a primary means for Land Grant research, extension, and instruction programs of the five participating institutions--American Samoa Community College, College of Micronesia, Northern Marianas College, University of Guam and University of Hawaii--to collaborate and cooperate to enhance their impact on agriculture and communities. ADAP is a mechanism to address common regional client-based issues while maintaining cultural, rural, economic and environmental integrity. New bylaws have been adopted which have the Vice-Chair succeed the Chair after a two-year term. When American Samoa assumes the Chair in 1997, it will be the first time in the program's ten-year history that ADAP will be led by an institution other than Hawaii. The role of the Coordinator at each institution is being strengthened through additional tasking and responsibilities for administrative management.

The principal researcher believes the five participating institutions are geographically dispersed yet facing many similar issues which can best be served through extensive networking and communication. ADAP facilitates communications and seeks to raise levels of academic achievement and improve the quality of education. In addition to a capacity building degree studies program for bachelors, masters and doctoral students, ADAP in 1996 opened a new area in faculty/staff development to improve institutional capability and credibility.

ADAP's original goals are embodied in the 1992 strategic plan, namely to develop human resources within the institutions, to more effectively manage agricultural programs within and among the institutions, and to focus resources available on ADAP mission needs. Six priority research projects were initiated in 1996: animal health survey, livestock waste management, sustainable agricultural

management options, dietary guidelines for Pacific foods, family empowerment and sustainable soil nutrient management.

This work has been underway for seven years with an annual appropriation of \$650,000 to the former Extension Service. In fiscal year 1994, an appropriation of \$608,000 was made to CSREES to continue the ADAP program. The fiscal year 1995 appropriation was \$544,000 and fiscal year 1996 appropriation is \$564,000. The appropriation total to CSREES is \$1,716,000.

Non-federal funds are not provided. Unspecified in-kind support, such as facilities, equipment and administrative support, are provided by each institution and, in some specific projects, by non-ADAP collaborating institutions.

This work is being carried out by American Samoa Community College, College of Micronesia, Northern Marianas College, University of Guam, and the University of Hawaii. It is anticipated that these institutions will build a sustaining capability by the year 2002.

ALTERNATIVE FUEL CHARACTERIZATION LABORATORY

The Alternative Fuels Characterization Laboratory Phase VI project promotes and advances alternative fuels utilization through information dissemination and assisting in the resolution of environmental and economic issues. The focus has been on ethanol-blend and biodiesel fuels. The principal researcher believes this is the only laboratory in the nation devoted to studying the use of fuels made from renewable feedstocks. The results of the research conducted here are national in scope. Development of fuels from renewable resources may reduce the dependency on foreign petroleum while providing cash crops for farmers. In the long run, renewable fuels are essential to sustainability.

The goal continues to be determining the parameters and performance of fuels made from renewable agricultural resources and disseminating this information to the scientific community and to the public. A data base has been made available. The researchers are productive, reports are timely, and requests for research are acted upon. Recently, the research mission was broadened to encompass promotion and advancement of alternative fuels through information dissemination. Continued monitoring, examination of formulations, and evaluation of performance provides the consumers with information regarding the efficiencies of the broad range of fuels. The validity of ethanol blends has been defined. Project personnel serve as North Dakota's representatives to the Governors Ethanol Coalition, which supports efforts to transfer information on development and utilization of agriculture biomass as alternative fuels. An investigation of the potential for improving the profitability of ethanol plants through recovery of carbon dioxide as a byproduct is underway. Ethanol fuel stations are being promoted through encouraging public institutions to maintain flexible-fueled fleets. The behavioral characteristics of ethanol in emissions and in fuel evaporation canisters were measured and research undertaken to address concerns.

The work supported in part by this grant began in fiscal year 1991. The appropriations for fiscal years 1991 through 1993 were \$250,000 per year, \$235,000 in fiscal year 1994, \$204,000 in fiscal year 1995, and \$218,000 in fiscal year 1996. A total of \$1,407,000 has been appropriated.

At the University of North Dakota for fiscal year 1994, the salaries of faculty and technician's approximated \$80,000; fringe benefits are additional. Industry grants were \$60,000. For FY95, State funding was in excess of \$20,000. For FY96, the combination of industry, state, and city funding will exceed \$46,000. No amounts are available for prior fiscal years.

The University of North Dakota, Grand Forks, is the site of the Energy and Environmental Research Center, a major research laboratory employing over 250 scientists and technicians. The University researchers anticipate this work may be completed in fiscal year 1997.

CENTER FOR AGRICULTURE AND RURAL DEVELOPMENT

The research provides current economic information on international trade in agriculture and analyses of the implications of trade policy alternatives on the agricultural sector of the United States and other countries. The principal researcher believes that according to the proposal, trade negotiations and agreements are of national concern to policymakers, farmers, and agribusiness industries because of the implications for maintaining or opening markets and establishing terms of trade and prices. Typical agreements are extremely complex, requiring analysis by specialists to determine outcomes and to provide objective and accurate information to those impacted by such agreements.

The goal is to assess and evaluate various proposals affecting agricultural trade, to provide analytical support to the Office of the U.S. Trade Representative, and to provide information to farmers and agribusiness firms on the competitive implications of such agreements. An extensive number of theoretical studies and empirical and descriptive analyses of policy issues and technical problems pertaining to the Uruguay Round of negotiations were completed and provided to negotiators and the agribusiness community. Studies included the development of international trade models and assessments of trade options for meat, dairy, feed and cereal grains, oilseeds, and other commodities; impacts of the agreement upon selected countries; and reforms needed for compliance. Analyses included determination of the value and implications of export subsidies, import protection, and internal support mechanism and levels.

This grant supports six projects focusing on General Agreement on Tariffs and Trade monitoring and implementation problems; implications of the General Agreement on Tariffs and Trade for Eastern Europe, Baltic and the Newly Independent States; development of a model to assess the North American Free Trade Agreement and its linkages with the General Agreement on Tariffs and Trade; trade implications of U.S. food and development aid in developing countries; integration of China into world agricultural markets; and special projects as requested for the U.S. Trade Representative's office.

This research program was initiated in fiscal year 1989. Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$750,000; fiscal years 1990 and 1991, \$741,000 per year; fiscal years 1992-1993, \$750,000 per year; fiscal year 1994, \$705,000; fiscal year 1995, \$612,000; and fiscal year 1996, \$655,000. A total of \$5,704,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$111,210 State appropriations and \$175,616 miscellaneous for a total of \$286,826 in 1991; \$113,779 State appropriations and \$173,117 miscellaneous for a total of \$286,896 in 1992; \$120,138 State appropriations and \$164,707 miscellaneous for a total of \$284,845 in 1993; \$161,673 State appropriations and \$32,000 miscellaneous for a total of \$193,673 in 1994; and \$161,000 State and \$30,000 miscellaneous for a total of \$191,000 in 1995. 1996 preliminary non-federal allocation to this project is \$70,000 State appropriations and \$44,000 miscellaneous for a total of \$114,000.

The research program is carried out by the Center for Agriculture and Rural Development at Iowa State University. The university researchers anticipate that the work should be completed in 1998 with analyses of the final agreement of the Uruguay Round and related trade agreements and dissemination of these results.

CENTER FOR NORTH AMERICAN STUDIES, TEXAS

The purpose of this grant is to develop linkages with educational and other institutions in Mexico and Canada to share data and faculty, conduct research identifying trade opportunities and marketing problems, conduct policy analysis, and develop a broad range of training programs preparing agricultural/agribusiness firms for international marketing opportunities.

The principal researcher believes concerns about the impact of the North American Free Trade Agreement raise a number of international and national issues about trade development among the three countries. Alternative measures needed to assess and evaluate these issues. Research and training are needed to provide information on measures to expand U.S. exports and resolve potential social, economic, and environmental conflicts.

The goal is to promote strong agricultural ties among the three North American countries, ensure the continued competitiveness of U.S. agriculture, and foster greater cooperation among the three countries in resolving critical agricultural issues of common interest. As a result of this project, cooperative study, research, policy analysis and training programs have been implemented with institutional linkages in Mexico and Canada. Educational materials were developed and presented to the community of agribusinesses--over 2,000 people--regarding trade opportunities in Mexico, impacts of expanded trade on selected agricultural sectors, and the procedures of international marketing. Research comparing the competitiveness of major agricultural production sectors is focused on Mexico's dairy, livestock, meat, feed grain, and fresh vegetable industries. Data collection is underway for a study of GATT effects on trade of NAFTA countries,

emphasizing rice, sugar, and beef cattle. Information databases on North American agriculture are being built to support the center programs and allow access on the World Wide Web. The electronic database on NAFTA and agriculture currently contains over 3000 articles from major U.S., Canadian, and Mexican publications. A study of trans-boundary trade and environmental linkages found that existing institutions in both countries do not adequately address environmental losses or gains. Data on the environmental impacts of changes in management techniques for range livestock on a typical Rio Grande watershed are being studied.

Work supported by this grant began in fiscal year 1994 with an appropriation of \$94,000, \$81,000 in 1995, and \$87,000 in 1996. A total of \$262,000 has been appropriated. The non-federal funds and sources provided for this grant are as follows: \$39,000 State appropriations in fiscal year 1994 and \$54,000 in 1995. The State contribution for 1996 is unreported.

The research program is being carried out at Texas A&M University in collaboration with Louisiana State University, and other public universities in Texas. The program of work currently planned may be completed by 1999.

GEOGRAPHIC INFORMATION SYSTEM

The program is designed to transfer evolving geographic information systems technologies to state and local governments. This technology -- and in particular -- the related technologies including Internet access for information, data bases, and telecommunication for cooperative system development are sufficiently complicated that most of the people familiar enough with them to serve as effective transfer agents are researchers. The current program is being carried out by a non-profit corporation, The National Center for Resource Innovations whose directors and participants are the sub-contractors who are carrying out the program. These sub-contractors range over a wide spectrum of sizes and special areas of site based expertise involving different Departments in four academic institutions, one regional development authority and one non-profit corporation working on agro-environmental problems in the Chesapeake Bay. A new site at the University of New Mexico has been added by the Board this year. This unique institutional arrangement has helped fill a unique role in linking some of the otherwise balkanized efforts of agencies and academic institutions and now seven regions of the country.

The program has concentrated on establishing regional centers and has thus in many cases been also building regional and national scale frameworks for hierarchical decision making to even the farm field level. In order to accomplish this the program has been identifying local informational and institutional needs to be met, assessing availability of existing national or regional information, developing strategies for information acquisition and synthesis in cases where such information did not exist and initiating training for local governments and their information partners. These stages are largely completed through certain elements related to information synthesis. Current efforts involve synthesis of new information systems through information integration optimizing the new generation

of information exchange through the Internet as mentioned and extending technology transfer efforts to include essential roles for geographic information systems and related technologies in public education.

The principal researcher believes few national programs have impact without translation to the local environment, including either regional, state, or local government level. Much progress has been made in developing computer based information systems ranging from data on transportation systems to the quantity of a resource. Given a geographic dimension, these information systems provide an invaluable vehicle for sharing information over the various levels of government and even facilitate the integration of disparate data. The work of this project is needed to transfer this technology to state and local governments whose limited training budgets and sometimes isolated location make it difficult to use the latest technology. The technology developed in this program is useful in improving the management of our natural resources. While concentrating on issues related to agriculture, the independent, non-profit nature of the National Center for Resource Innovations facilitates linkages across disciplinary and institutional barriers, make it possible to use work at the state and local levels which was initiated at the Federal level. While the early phases of GIS concentrated on building information systems related to rural physical and natural resources, the current challenge is to integrate human economic, social and demographic information to better understand the relationship of human communities to the landscape. There is a need for this to better understand the technology consumer. In addition, there is a need for integrated information about other biological systems including insects, plants, and animals as we extend our work to include whole farm management within an ecosystem-based environment.

In this context, newer high capacity technologies are also beginning to provide other dimensions -- those of high level time related phenomena, including weather-associated transport of biological materials and their relationship to food producing systems. CSREES has funded seminal research in integrated pest and animal management in the 1970's and 1980's. At the other end of the spatial scale, the role of the public sector in geographic information system based precision farming technologies, data capture, and information synthesis as the subject of a current study group.

The original goal of this work was to serve as a pilot project for the transfer of geographic information systems technology to local governments as related to natural resources. It has carried out this function in a useful way. With impetus from this project and similar efforts economic and biological data are being presented in map fashion useful to state and local governments. This project has provided the impetus and linkages to facilitate planning work done in South Georgia with some assistance given to local tax assessment and parcel identification by a Department of Commerce sponsored Economic Development Authority. The Chesapeake project has linked seven state conservation entities in an effort to develop better watershed models and decision support systems. The Arkansas portion of the project has focused on training to educate county

employees with regard to the technology of geographic information systems and geographic positioning systems. The University of Wisconsin has continued to simultaneously support the high technology end of the evolution of new tools and seek new ways to implement change while measuring the impact of such implementation. The work in North Dakota has continued to focus on geographically referenced real time weather information. And, in the smallest of the efforts under this program, the efforts at Central Washington have provided training for a number of State personnel and others from various levels and institutions on how to utilize geographic information systems.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$494,000; fiscal year 1991, \$747,000; fiscal years 1992 and 1993, \$1,000,000 per year; fiscal year 1994, \$1,011,000; fiscal year 1995, \$877,000; and, fiscal year 1996, \$939,000. A total of \$6,068,000 has been appropriated.

For fiscal year 1990 through fiscal year 1996, to date, the work in this program had \$4,088,660 in non-federal support. In fiscal year 1990 non-federal support was \$714,940 consisting of equipment, data bases, and other miscellaneous contributions from foundations, city, and state governments. In fiscal year 1991 non-federal support was \$25,000 from county government. In fiscal year 1992 non-federal support was \$366,016 from county government, computer companies, and state governments consisting of equipment, software, facilities, and miscellaneous support. In fiscal year 1993, non-Federal support was \$713,900 consisting of financial and miscellaneous support from foundations, county and state governments. In fiscal year 1994, the non-Federal support was \$713,643. In fiscal year 1995 the non-Federal support was \$987,000. And in fiscal year 1996 is anticipated to be \$567,173.

The National Center for Resource Innovation Chesapeake Bay is located in Rosslyn, Virginia. This group is working under a memorandum of understanding (MOU) with several states of the Chesapeake Bay watershed project. Primary work is carried out by a 22 member working group represented by two agencies at USDA (NCRS and the Economics Research Service), at CSREES through the National Center's Chesapeake group, three universities, and others having special knowledge in these technologies. Other work is being accomplished at other regional centers. The southeastern center, in Valdosta, Georgia, in affiliation with the South Georgia Regional Development Center, has developed a comprehensive plan for the City of Adel as a model for other urban centers in their ten-county region. The southwestern center, in Fayetteville, Arkansas serves local governments through its training facilities at the University basing its technical approach on their expertise and past experiences with the federally developed system known as GRASS. They have developed pilot projects for some local jurisdictions and state level data bases which they have provided online. Central Washington University focuses on training in ARC/INFO for state planning and in three local governments and the Yakima Nation in the Yakima watershed. The north central center in Grand Forks, North Dakota, in affiliation with the University of North Dakota, focuses on relating real time weather data to other spatial attributes. In addition, this center has sought to implement ideas developed in other centers in the distance learning concept. The University of

Wisconsin-Madison, functioning as the Great Lakes center, continues a long history of involvement in the application of this technology at the local level with strong focus on soils/land-use and the institutional aspects of the integration of a new technology.

Spatially speaking, the Center is a national consortium and beneficiaries are nationally distributed. The immediate service areas of the sites vary in extent and each is taking an approach unique to both its capabilities and institutional arrangements and needs locally. All sites share technology with each other. Several have developed related cooperative agreements for additional work which is transferred through the Center's network to the others. This in turn, benefits each site's programs.

In fiscal 1996 in association with the University of New Mexico, the newest site, the Center is building a home page on the Internet's world wide web to illustrate and make more visible its programs. At the current rate of funding, the researchers anticipate that this technology, which is a moving target, will be generally available and accessible in three to four years.

GULF COAST SHRIMP AQUACULTURE

Work under this program has addressed important research needs necessary for the development of a U.S. marine shrimp farming industry. Studies have been conducted on production intensification, prevention and detection of diseases, seed production, and the development of specific pathogen free stocks and genetically improved stocks. Performance trials in various production systems have been conducted. Maturation and reproductive performance in seed production systems has reached commercial feasibility. Protocols for viral detection have been improved and have led to the development of specific pathogen free stocks of commercial importance. A number of important viral pathogens of marine shrimp have been identified and described. In fiscal year 1996, emphasis will be placed on the industry seed supply, disease control, environmental quality, and production systems.

The principal researcher believes there is potential to enhance domestic production of marine shrimp through aquaculture in order to reduce the annual trade deficit in marine shrimp, which is approximately \$2 billion. Research could improve the supply of high quality seed, to improve shrimp health management, and enhance production efficiency in shrimp culture systems. The U.S. has the opportunity to become a major exporter of shrimp seed and broodstock, disease control technologies and product and services.

The original goal was to increase domestic production of marine shrimp through aquaculture. Studies have been conducted on production intensification, prevention and detection of diseases, seed production, and the development of specific pathogen free stocks. Maturation and reproductive performance in seed production systems are now commercially feasible. Protocols for viral detection have been improved and have led to the development of specific pathogen free stocks. These stocks have been evaluated in most of the commercial shrimp farms

in the U.S. and have demonstrated consistently superior performance over previous stocks leading to a more profitable industry. The development of these stocks has also established the U.S. as the primary source of specific pathogen free shrimp seed world wide. A selective breeding program has been initiated for commercially important traits such as growth rate and disease resistance.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$1,050,000; fiscal year 1986, \$1,236,000; fiscal year 1987, \$2,026,000; fiscal year 1988, \$2,236,000; fiscal year 1989, \$2,736,000; fiscal year 1990, \$3,195,000; fiscal year 1991, \$3,365,000; and fiscal years 1992-1993, \$3,500,000 per year; fiscal year 1994, \$3,290,000; and fiscal year 1995, \$2,852,000; and fiscal year 1996, \$3,054,000. A total of \$32,040,000 has been appropriated.

The U.S. Marine Shrimp Farming Consortium estimates that non-federal funding for this program approaches 50 percent on the Federal funding for fiscal years 1991-1994. The source of non-federal funding is primarily from state and miscellaneous sources. In-kind contributions from the industry were not included in this estimate, but are substantial as the program is dependent upon industry cooperation to carry out large scale commercial trials.

The work is being carried out through grants awarded to the Oceanic Institute, Hawaii and the Gulf Coast Research Laboratory in Mississippi. In addition, research is conducted through subcontracts at the University of Southern Mississippi, Tufts University, the Waddell Mariculture Center in South Carolina, the Texas Agricultural Experiment Station, and the University of Arizona. The researchers anticipate that the specific research outlined in the current proposal will be completed in fiscal year 1997.

HERD MANAGEMENT, TENNESSEE

The research plan was developed in 1991. Research to date has focused on the comparison of two systems of herd management that evaluate the effect of preweaning protocols on growth performance and carcass quality of genetically lean beef. The breeding study utilizes selected beef sire breeds to produce carcasses at slaughter with an increased percentage of lean and reduced percent of fat tissue. The project also has studied other management systems such as use of milk replacer as food for the calves from day 3 of life to six months of age instead of allowing the calves to nurse their mothers. Current studies are examining other management factors such as time of castration and whether changes in carcass type has an impact on fertility of female progeny. The principal researcher believes the purpose of this research is to produce a high quality, low fat beef product that meets the demands of an increasingly health conscious public and utilizes feeds available in the Southern region in economical systems for beef producers. Efforts are underway to study the nutritional properties and health aspects of lean beef.

The goal is to use selective breeding and management of cattle to produce lean meat. Preliminary data suggest that genetically lean animals exhibit faster growth performance and reach market weight faster. The carcasses have a greater proportion of muscle to bone and muscle to fat compared to control groups. This

project also has demonstrated a significantly increased length of time to slaughter and smaller carcass weights for calves fed milk replacer. The use of milk replacer for raising these calves also appeared to increase cholesterol, fat and calorie content of the meat.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal year 1991 was \$375,000. The 1992 and 1993 appropriation was \$475,000 per year; \$613,000 for fiscal year 1994; \$500,000 for fiscal year 1995 and \$535,000 for fiscal year 1996. A total of \$2,973,000 has been appropriated.

The non-federal funds and sources provided were as follows: \$2,675 State appropriations, \$1,862 product sales and \$2,000 miscellaneous in 1991; \$2,675 state appropriations, \$22,697 product sales and \$2,000 miscellaneous in 1992; \$2,782 State appropriations, \$56,803 product sales and \$2,000 miscellaneous in 1993; \$5,000 State appropriations, \$15,000 product sales, and no miscellaneous in 1994; and \$5,000 State appropriations, \$19,000 product sales and no miscellaneous in 1995.

Research is being carried out by scientist at Tennessee State University, and other locations in cooperation with Genetic Research and Management Company in Tennessee. The investigators anticipate that this research will be completed in fiscal year 1997.

MISSISSIPPI VALLEY STATE UNIVERSITY

Funds were used to strengthen academic programs, including accreditation and reaccreditation. Eight academic programs have been accredited. Academic offerings have been broadened consistent with the needs of students from the Mississippi Delta. Curriculum additions have had a positive impact on student enrollment. Courses continue to be modified to reflect the needs of graduates as well as employers in the Mississippi Delta, with particular emphasis on those areas that employers have the greatest need. The funds continue to provide enhancements related to other program and administrative support areas that positively impact program delivery and administration at Mississippi Valley State University. The principal researcher believes this project is of a local need for strengthening university capacity and curriculum development at Mississippi Valley State University.

The original goal was to provide funding to alleviate the fiscal shortfalls of the university so that sound academic programs could be developed and maintained. This funding has strengthened the fiscal and academic areas of the university. The budget deficit has been eliminated and the general administration of fiscal and academic programs greatly improved. Increased quality of instruction and programs has benefitted students. This is reflected in the higher graduation rate, increased student enrollment, enriched faculty and improved community relationship.

This program was initiated in fiscal year 1987. Grants have been awarded from funds appropriated as follows: fiscal year 1987, \$750,000; fiscal years 1988 and 1989, \$625,000 per year; fiscal year 1990, \$617,000; fiscal year 1991, \$642,000; fiscal years 1992 and 1993, \$668,000 per year; fiscal year 1994, \$593,000; fiscal year 1995, \$544,000; and fiscal year 1996, \$583,000. A total of \$6,315,000 was appropriated.

Mississippi Valley State University received State and private funding during the period of this grant. The State figures provided here are for enhancement funds gained above the University's standard formula generated funds. The sources and amounts are as listed:

SOURCE

FY	State	Private	Total
1987	\$ 0	\$168,640	\$ 168,640
1988	0	186,036	186,036
1989	68,658	190,258	258,916
1990	207,879	369,358	577,237
1991	333,263	337,700	670,963
1992	349,427	470,220	819,647
1993	35,750	358,680	394,430
1994	590,890	568,970	1,159,860
1995	841,654	530,300	1,371,954
1996	1,197,917	590,824	1,788,741

These funds are intended to strengthen programs at Mississippi Valley State University. The total program has been carried out on the campus at Itta Bena. The objectives of the current grant will be completed by September 30, 1996.

PM-10 STUDY, CALIFORNIA AND WASHINGTON

The research on PM-10 is being conducted by scientists at the University of California and Washington State University. The California program has focused on developing and refining methods to accurately measure and detect the sources of PM-10 emissions from various agricultural practices, and to investigate alternative practices for reducing potential air pollution on susceptible California crops and soils. The Washington State University scientists are using refined instruments on field sites to measure and predict the effects of wind erosion and agricultural practices in the Columbia River Basin region on PM-10 emissions, with the assistance of a portable wind tunnel. Alternative cropping systems, tillage practices, rotations, and weed control practices are being developed and compared for control of PM-10 emission pollution under Columbia River Basin conditions. The principal researcher believes there has been growing national concern over the potential health and safety aspects of air pollution from dusts and suspended particulate matter, resulting in passage of the 1990 Clean Air Act which requires the monitoring and control of such pollution. Because of particular problems from

PM-10 emission in the arid regions of the Western U.S., more accurate information is badly needed on the role of agricultural operations in intensively cultivated soils in California and the Columbia River Basin, as sources of PM-10 pollution, in order to assist growers to develop alternative agricultural management practices to control PM-10 emissions.

The original goals of this research were to measure the PM-10 emission rates from significant crop and tillage practices, to determine the source of PM-10 emissions on soils in agricultural regions of southern California and the Columbia River Basin in the Pacific Northwest, and to explore cost-effective alternative agricultural practices to control these emissions. The second year of field measurements are being completed on PM-10 emissions on production practices on almonds, figs, walnuts, wheat, and from dairy farms and feedlots in California, and on agricultural practices in the croplands in the Columbia River Basin. Susceptible climatic and soil conditions and tillage and cropping practices have been identified and are being used to develop prediction tools to assist growers to adopt alternative practices to reduce potential air pollution by PM-10 particulate emissions.

The work supported by this grant began in March 1994. The appropriation for fiscal year 1994 was \$940,000; fiscal year 1995, \$815,000; and for fiscal year 1996, \$873,000. A total of \$2,628,000 has been appropriated. The program is matched by State funds in the form of salaries, benefits, and operating costs.

This work is being directed by participating scientists at the University of California-Davis, and at the Washington State University. The need to develop and evaluate new procedures and instrumentation, such as the fast response laser absorption system and the elastic lidar system, for more scientifically accurate measurements for predicting PM-10 emissions, and to evaluate new alternative control practices in the field, make this program a long-term study.

RURAL PARTNERSHIPS

The project concept consists of researching and implementing a "best practices model" for the delivery of information and services by local, state, and Federal governments. It is intended that this effort will define a more integrated and supportive system responsive to the needs of communities and rural regions for the delivery of services and information. A second objective is to evolve and implement a common rural research agenda that delivers relevant and timely information to support policy decisions and program delivery. The principal researcher believes that citizens across the United States are striving for more efficiency from Federal, state, and local institutions and governments. Rural people, enterprises, and communities are frustrated with the fragmentation and duplication among service providers. Better means of service delivery and research guidance need to be devised to enhance the capability of agencies and institutions to respond to local needs.

The original goal of the research was to identify and test a model for collaboration and coordination in delivery of effective and efficient services to rural

constituents. The model will have the potential for dissemination and application nationally. The Nebraska state government, the Land-Grant University, and Federal agencies are currently in the process of designing a model for implementation.

The work supported by this grant begins in fiscal year 1996 and the appropriations for fiscal year 1996 is \$250,000. The non-federal funds and sources provided for this grant were as follows: \$140,000 state appropriations in fiscal year 1996.

Research will be conducted at The University of Nebraska. The researchers anticipate that work may be completed in fiscal year 1997.

VOCATIONAL AQUACULTURE EDUCATION

In 1990, Congress, through USDA's Office of Higher Education Programs, began funding a multi-year project to: develop curricula and support materials, field test content, and conduct national teacher training on the materials. In 1991, utilizing the new instructional materials, schools in Texas, Iowa, Indiana, South Carolina, Pennsylvania and Washington were selected to field test the curriculum. They completed the field tests in January 1992. In August 1992, teacher teams from all 50 states received training in Raleigh, North Carolina on how to teach the material. Additionally, a recirculating systems manual was developed and instructors explored a model classroom recirculating system designed and built in cooperation with North Carolina State University. Some 2,000 copies of the 1,100 page, five volume core curriculum and support materials were sent to all states in the fall of 1992. States replicated the training program at their own teacher workshops in 1993. In addition, grant funds were used to develop and test 16 species-specific curriculum modules, complete and test the recirculating systems manual, support additional regional in-service training, design outreach programs to culturally diverse audiences, and begin development of units on biotechnology and sustainable agriculture as they relate to aquaculture. In September 1993, in-service training for the 1890 Land-Grant Colleges and Universities was held at North Carolina A&T University in Greensboro, North Carolina.

The 1994 grant funds are supporting education research through December 1996 to allow for completion of writing and testing of the species-specific curricula and for initial layout and design of teaching materials. The 1994 grant is being used to print and distribute the species-specific materials, develop a national in-service training center for secondary aquaculture education, support regional learning centers and other outreach programs for multicultural audiences and inner-city schools, complete the sustainable agriculture and biotechnology units, produce and distribute consumer information on aquaculture, and conduct an evaluation of the vocational aquaculture curriculum project.

The FY 1995 project includes an extensive project evaluation which will determine, in both quantitative and qualitative terms, its overall impact. In addition, this project includes elements of supplementary curriculum development,

regional in-service training for teachers, and specialized teaching programs for minority and inner city students interested in agriculture and science topics. An up-to-date inventory of available aquaculture resources will be developed, distributed, and updated on a regular basis. Technical materials as presented in the original core curriculum modules will be reassessed and where appropriate, technical information will be repackaged in an electronic format -- i.e., computer software, video, etc. -- and made available for distribution -- Internet, telecommunications.

The FY 1996 project will use the results of the comprehensive project evaluation -- from the FY 1995 project -- to develop models to illustrate how aquaculture education can positively impact math, science, and problem solving skills and abilities of students, be successfully used by schools to integrate academic and vocational education, and used in school-to-work initiatives and related activities such as tech prep and supervised agricultural experiences. Models of aquaculture's successful "infusion" into agricultural and vocational programs will be presented during national in-service training in order to provide teachers with ideas, insight, and examples that they may incorporate into their own schools and classrooms. During the FY 1996 project, the aquaculture facilities at the National Training Center for Secondary Aquaculture Education and four Regional Aquaculture Learning Centers will be utilized to provide in-service training sessions and opportunities for teachers seeking advice on setting up and maintaining aquaculture laboratories. Regional Aquaculture Learning Centers, representing four geographical regions -- eastern, southern, midwestern, and western -- will be selected on a competitive basis. In addition, a new curriculum module will be developed exploring natural aquatic resources, their conservation and management, and environmental science opportunities in the community related to the aquatic environment. This module will offer teachers who are not able to acquire materials and equipment necessary for aquaculture in the classroom opportunities to use available natural resources to teach some of the same principals, techniques, and skills presented in the core aquaculture materials. Projects will draw attention to the inter-relationship between aquatic and terrestrial environments, including watersheds, riparian zones, wetlands, and estuaries. Instructional materials will introduce basic elements of applied biology, ecology, water chemistry, and hydrology, as well as biotechnology, economics, and sociology in order to allow students to investigate and assess potential impacts of aquaculture and agriculture on the aquatic environment. Finally, during the FY 1996 project, selected aquaculture topics and techniques presented in the aquaculture core curriculum and its supplements will be synthesized into short technical presentations in electronic, multimedia format.

The principal researcher believes, prior to this project, there were very few curriculum or teaching materials on aquaculture available for local secondary schools and teachers were not prepared to teach this subject.

Funds were originally appropriated by Congress to determine if curriculum materials existed and to what extent; what additional materials were needed; and if it was possible to provide these materials, train teachers, and conduct a quality aquaculture education program in the secondary and postsecondary schools.

Progress, as measured by aquaculture curriculum materials development and use, and by student enrollment in aquaculture and related science courses, has been assessed by the Council's Board of Directors, the Council's Aquaculture Task Force, and by an independent aquaculture curriculum development peer review panel. The project has fully met and far exceeded the original goals. To date, a survey of existing aquaculture materials has been conducted, an Aquaculture Resource Guide has been published, and a new core aquaculture curriculum has been developed and field tested at the six Regional Aquaculture Learning Center sites. In addition, 16 species-specific curriculum modules and two additional modules covering biotechnology and sustainable agriculture, and a special manual for the construction and management of a recirculating culture system have been developed. Instructional materials have been distributed to all 50 states, teacher teams from all states have received training at a national workshop and additional in-service training has been provided by the states. Results from the six test sites report a 50 to 400 percent increase in students applying to study aquaculture and the integration of math and science into the curriculum with the full cooperation of teachers in other disciplines.

A total of \$3,060,000 has been appropriated for this program -- \$247,000 in fiscal year 1990, \$500,000 per year in fiscal years 1991 through 1993, \$444,000 in fiscal year 1994, \$407,000 in fiscal year 1995, and \$436,000 in fiscal year 1996.

The project has been very successful in generating support beyond the Federal investment. We know that two of the test site schools have invested over \$3 million of their own money in the project. Complete information from the other sites is not currently available but will be included in the comprehensive project evaluation conducted as part of the 1995 fiscal year grant activities.

The work is being coordinated by the National Council for Agricultural Education headquartered in Alexandria, Virginia. The six test site schools are located in Texas, Iowa, Indiana, South Carolina, Pennsylvania and Washington. Other work has been conducted at North Carolina State University in Raleigh, and at North Carolina Agricultural & Technical State University in Greensboro. The curriculum is being disseminated in all 50 states and U.S. Territories in the Caribbean and the Pacific and the states are conducting their own additional in-service training. The principle investigators have indicated that they may request one additional year of funding to enable them to update the curriculum modules and expand the dissemination process.

WATER QUALITY - ILLINOIS

The Illinois Groundwater Consortium grew out of a FY 1990 appropriation of \$500,000 to Southern Illinois University at Carbondale to focus on the short- and long-term effects of agricultural chemical contamination on the environment, the groundwater, and ultimately, human health and welfare. As a result of this appropriation, the University joined forces with the Illinois State Geological Survey, Illinois State Water Survey, University of Illinois Cooperative Extension Service, and the University of Illinois Agricultural Experiment Station to create the Illinois Groundwater Consortium. The Consortium's primary mission, then and

now, is to effectively work toward providing a scientifically-valid basis upon which meaningful agricultural chemical management and regulatory decisions can be based. The Consortium has worked to address the concerns of the agricultural and agrichemical industries as well as the valid concerns of the agencies charged with protection of environmental quality. Example topics currently under study include herbicide movement/tillage practices, protection of water quality in watersheds, modeling transport of agricultural chemicals, grass buffer strips for pollution reduction, policy alternatives to reduce agricultural chemicals in public water supplies and the impact and recovery from flooding in the Midwest region.

The principal researcher believes that as the Consortium enters its seventh year, the FY 1996 appropriation is targeted to research pertaining to the impacts and recovery of Midwestern region from flooding. The 1993 and 1995 flooding of the Mississippi, Missouri, and Illinois Rivers, and their tributaries, created devastating effects on the farm lands, communities, and natural resources of the area. These effects have major implications for agricultural practices, water quality, and public policy decisions. This natural catastrophe has resulted in a need for further studies examining the impact of the flooding on surface/groundwater, soils and their rehabilitation, biodiversity, and on economic and public policy in the region. In addition, there is the need to disseminate results to the public to enable the Consortium findings to be beneficial in the near term to those needing the information. To facilitate this work, the Consortium expanded its participant institutions in 1995 to include Southern Illinois University at Edwardsville. Southern Illinois University at Edwardsville's strategic location in the heart of the flood damage area, as well as its qualified research scientists who work in the Consortium's high priority research areas, will strengthen the capabilities of the Consortium. The highest priorities of the Consortium is the funding of research upon which public policymakers working on land use or groundwater protection issues in flood plain areas can base decisions, and the broad dissemination of this information. The principal researcher believes this research to be of national, regional or local need.

The Illinois Groundwater Consortium was established to coordinate and support research on agricultural chemicals in Illinois groundwaters. The research team has accomplished an improved understanding of the fate and movement of agricultural chemicals under Illinois crop production conditions. A publication supported by the Consortium entitled, "Buried Treasure: 50 Ways Farmers Can Protect Their Groundwater," has received widespread acceptance and use for lay audiences. The Illinois Groundwater Consortium has accomplished a major step toward coordination and exchange of information/research results relating to groundwaters in Illinois. The Groundwater Bulletin reports research results from the Consortium. The Bulletin reports on atrazine studies, nitrogen management, farming practices for more efficient chemical use, geological impacts and policy options to safeguard groundwaters. The Consortium investigators took an active role in monitoring and investigating herbicide, pesticide and coliform impacts during and after the Mississippi River Flood of 1993. The research continues today on the long-term impacts of flooding and management of the affected areas. The findings from this study will be useful in restoring the flooded cropland to full productivity and in establishing a base upon which policy management decisions

can be made. The Consortium annually publishes a proceedings of its annual conference. The 1995 Proceedings of the Fifth Annual Conference is more than 200 pages of research results. The Consortium represents an exceptionally productive cooperative effort involving several universities and agencies.

Research grants have been awarded from funds appropriated as follows: fiscal year 1990, \$494,000; fiscal year 1991, \$600,000; and fiscal years 1992-1993, \$750,000 per year; fiscal year 1994, \$666,000; fiscal year 1995, \$460,000; and fiscal year 1996, \$492,000. A total of \$4,212,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$255,891 state appropriations in 1991; \$447,237 state appropriations in 1992; \$644,054 state appropriations in 1993; and \$623,124 state appropriations in 1994.

The work is being carried out by the Illinois Groundwater Consortium and coordinated by the Carbondale campus of Southern Illinois University. The research is being conducted by staff at the University of Illinois, Southern Illinois University, the Illinois State Geological Survey and the Illinois Water Survey at locations across the State. The plans for fiscal year 1996 funding will be for research to be conducted through fiscal year 1997.

WATER QUALITY, NORTH DAKOTA

The overall objective of the research is to develop an understanding of the occurrence, transport and fate of agricultural chemicals found in representative field settings in the Northern Plains. The ultimate goal is to provide a scientifically valid strategy for management of chemicals in agricultural production. Seven field sites have been instrumented in North Dakota and data has been collected on soil, water, weather and plant observation. The results are being analyzed and manuscripts are being written to be published in journals, conference proceedings or other reports. This research has cooperative projects with North Dakota State University at the Oakes site, the University of Waterloo, the Devils Lake Sioux Tribe and the Bureau of Reclamation. This program will provide opportunities for education and training of undergraduate and graduate students in groundwater geology and agricultural sciences. The principal researcher believes the objective of the groundwater research program is to provide a scientifically valid basis upon which meaningful agricultural chemical management and regulatory decisions can be made. Chemicals in groundwater present both a public health problem and an environmental quality problem of significant short-term and long-term importance on a local, regional and national scale. The principal researcher believes this research to be of national, regional or local need.

The original goal of the research was to collect data on the fate and transport of chemicals used in agricultural production and to develop management strategies to minimize contamination of water sources. Seven field sites in North Dakota differing in agricultural practices, geology and hydrogeology have been instrumented to collect water quality data. Data collection and analyses are continuing on a regular basis at four primary sites. Based on initial results, the water transport flow mechanisms are variable at the site tested. Microbial data,

collected at two sites, showed that the microbial activity is low at both sites. The report on the role of airborne particulate matter in pesticide transportation in eastern North Dakota is complete. The paper entitled "Vapor-Phase and Particulate-Associated Pesticides and PCB Concentrations in Eastern North Dakota Air Samples" has been accepted by the Journal of Environmental Quality. Data collection has been finalized for the Oakes project and is being processed and interpreted. This is a cooperative effort between the Energy and Environmental Research Center and North Dakota State University investigating nitrate occurrence and distribution in a sand plain aquifer under irrigated corn production. The report is currently under preparation.

In 1989, \$1.0 million was appropriated under the ground water research program. Beginning in 1990, funds have been earmarked under the Direct Federal Administration program. Work supported by this grant was initiated in fiscal year 1990 with an appropriation of \$987,000. Subsequent appropriations have been \$750,000 in fiscal year 1991, \$500,000 per year in fiscal years 1992-1993; \$470,000 in 1994; \$407,000 in fiscal year 1995; and \$436,000 in fiscal year 1996. A total of \$5,050,000 has been appropriated for this water quality research program. The Energy and Environmental Research Center at the University of North Dakota indicates that non-federal funds have not been provided for this grant.

Research is being conducted at the University of North Dakota through its Energy and Environmental Research Center. A portion of the pesticide research was sub-awarded to North Dakota State University. The Bureau of Reclamation and the University of Waterloo are cooperators. The current funded project supports research for three years through fiscal year 1998.

BUILDINGS AND FACILITIES

Question: I understand that the University of Wyoming and Northwestern State University of Louisiana are relinquishing grant funds awarded to them under CSREES buildings and facilities program. Is this correct? How much funding is being relinquished? Have funds been relinquished by any other grant recipients?

Answer: Yes, this is correct. The University of Wyoming and Northwestern State University of Louisiana have provided official notification to the agency that they wish to terminate their respective facilities grants due to their inability to meet the matching requirement under the grants. The approximate amount of funding to be relinquished by the University of Wyoming is currently anticipated to be \$2,203,459, and the approximate amount of funding to be relinquished by Northwestern State University of Louisiana is currently anticipated to be \$68,870. No funds have been relinquished by any other grant recipient to date.

Question: What happens in such cases where grant funds awarded are relinquished back to the agency? Do these remain in the "buildings and facilities" account until direction as to their use is provided by the Appropriations Committees of the Congress or does the Department intend to submit a

reprogramming request to the Subcommittee for approval?

Answer: The relinquished funds are returned to the agency and remain in the "buildings and facilities" account. It is not anticipated that funds would be used for new buildings and facilities projects but would be used to complete projects which have received funding. Direction could be provided by the Appropriations Committees of the Congress for the disposition of the relinquished funds.

Question: Dr. Robinson, you indicate in your written statement that "in keeping with the Administration's policy of awarding research and construction grants through a competitive merit--reviewed process" no funding is proposed for the Research and Education, Buildings and Facilities program.

As you are aware, a number of projects were initiated under this program and require additional federal funding for completion. Are you saying that because the projects funded to date were not selected through a competitive merit-reviewed process, none of them merit funding in the Administration's view?

Answer: Yes, we are aware that a number of projects require additional funding. Projects funded to date have been evaluated based upon their relationship to the mission of the US Department of Agriculture; the local, regional, national or international impact of the proposed facility; the local commitment to the programs to be housed in the completed space; and the grantee's ability to provide matching funds from non-Federal sources. However, we believe that the current budget climate calls for making funding choices which best reflect national and international interests. Providing federal support for university facility projects that have not passed through a competitive selection process may not be the best use of our current resources.

Question: The new Farm Bill recently signed into law rejects the Administration's proposal to establish a competitive Buildings and Facilities program. Instead, it requires all proposals for new facilities to be submitted to the Department, to be reviewed in accordance with specific criteria set forth in the law. The Department is to submit the results of its evaluations of each proposal to the Congress no later than 90 days after receiving the proposal. Is the Department working to establish this process so that it can begin the review of proposals for new facilities?

Answer: The Department establishes guidelines for the development of facility grant proposals and a review protocol which includes a yearly site visit by a team of program experts. The site visits are for use in administering the program of grants for university facilities identified in the reports accompanying the annual appropriation acts. The guidelines are similar to criteria set forth in the FAIR Act of 1996, including non-Federal cost-sharing, non-duplication, national research priorities, and long-term institutional support. The Department has not received a request to conduct a facility proposal review under FAIR Act criteria. Modifications to the current process to accommodate requests for unfunded

feasibility studies will be developed as needed, with consultation with Congressional staff and the public at large, as appropriate.

Historically, Congress has provided funding for specified institutions and facilities which the Department then invites to submit a proposal and conducts a feasibility study. The findings of the feasibility studies are submitted to Congress for use in future funding decisions.

Question: There has been a question raised as to whether funding provided through fiscal year 1996 completes the Federal share of the poultry biocontainment facility at the University of Delaware. Is it the agency's view that the Federal share of the project is complete?

Answer: Based upon information recently received from the University of Delaware, it appears that the total cost of the poultry biocontainment facility has increased by \$1 million, bringing the total cost to \$8 million. It is apparently the University's intention that this increase be equally supported by Federal and non-Federal funding, so that the Federal share would be increased from \$3.5 million, as originally reported to Congress in the CSREES facility study report, to \$4 million.

Question: For each of the facilities funded under the Cooperative State Research, Education and Extension Service buildings and facilities account in the fiscal year 1996 appropriations act, or for which a report was requested, or was partially funded in prior-year appropriations acts but never completed, please list the total estimated costs of the project, the Federal and non-Federal shares, the total amount of Federal funding provided to date, the current status of the project, and the status of the non-Federal match.

Answer: This information is provided in the attached chart. No reports were requested under the buildings and facilities account in the fiscal year 1996 appropriations act.

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE
U.S. Department of Agriculture

STATUS OF PROJECTS

CSREES BUILDINGS AND FACILITIES PROGRAM-Fiscal Year 1996

5/8/96

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Poultry Science Facility, Auburn University --Auburn, AL--	11,748	5,874	5,874 <u>A/</u>	1,860	4,014	Design work underway	Assurance of required match has come from State and poultry industry sources	None
Restoration of Camell Hall, University of Arkansas --Fayetteville-- ¹				1,946		See footnote B/		
Alternative Pest Control Containment and Quarantine Facility, University of California --Davis & Riverside--	35,000	17,500	17,500	7,421	10,079	Design work ongoing and construction to be initiated in FY 1997	Majority of matching funds are anticipated to become available in FY 1997 --and in-kind value of land to be proposed as part of match--	None
Animal Reproduction & Biotechnology Facility, Colorado State University --Fort Collins--	6,658	3,385	3,273	1,551	1,722	Construction initiated in FY 1995	All matching funds are available	None
Agricultural Biotechnology Laboratory, University of Connecticut --Storrs--	20,000	10,000	10,000	1,915	8,085	Design work underway	Matching funds to be made available annually by the State	None

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Poultry Biocontainment Laboratory, University of Delaware --Newark--	7,000	3,500	3,500	3,500	0	Design complete, construction initiated	All but \$350,000 in matching funding has been secured	None
Aquatic Food Products Facility, University of Florida --Gainesville--	3,000	1,500	1,500	1,500	0	Design work underway	Matching funds are to be obtained from the State legislature	None
Agricultural Biotechnology Facility, University of Idaho --Moscow--	13,479	7,549	5,900	2,356	3,544	Design complete, construction completed on an Aquaculture Lab --one component of the project--	In 1991 University provided approx. \$1,000,000 to complete an aquaculture lab --but not all expenditures have been accepted by CSREES-- but only \$250,000 in additional State appropriations have been secured. University was not able to receive State appropriations for this project in FY 1993, 1994, or 1995, but anticipates some State funding in FY 1997	Funds made available in 1993 and 1994 have not been released due to lack of matching support and delayed and/or unacceptable proposal submissions. The university and/or State has not considered this project a high priority as evidenced by the continued failure to provide matching funds. FY 1995 funds in the amount of \$1,761,000 were rescinded
Biotechnology Center, Northwestern University --Chicago--	24,400	12,400	12,000	6,536	5,464	Construction ongoing	Matching available	None

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Animal Research Facility, Louisiana State University --Franklinton-- and Mississippi State University --Poplarville--	2,560	1,280	1,280	1,280	0	Design work to be initiated in 1996	LSU match to be requested from the State legislature in 1995-96; MSU match could be available from State appropriations in 1996	None
Institute for Natural Resources & Environmental Science, University of Maryland --College Park--	23,800	13,800	10,000	7,712	2,288	Design work underway	Matching funds to be secured from State legislature	None
Center for Hunger, Poverty, Nutrition, & Policy, Tufts University --Boston--	28,272	16,000	12,272	7,350	4,922	Design work underway	CSREES is considering the University's proposed use of the in-kind value of land as part of its matching contribution. Cash may become available for additional matching purposes in the future	None
Center for Water & Wetlands Resources, University of Mississippi --Oxford--	6,510	3,255	3,255	3,255	0	Design work ongoing	Approx. one-half of matching funds are secured from State appropriations, and University indicates that they are working on obtaining remainder	None
National Food Service Management Institute, University of Mississippi --Oxford--	6,000	3,000	3,000	3,000	0	Design work to be initiated in 1996	Match is scheduled to be secured by June 1996	None

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Center for Plant Biodiversity, Missouri Botanical Garden --St. Louis--	15,826	7,913	7,913	4,752	3,161	Construction work initiated	At least \$5-6 million currently available	None
Center for Molecular Biology, Rutgers University --New Brunswick, NJ--	84,600	47,400	37,200	16,836	20,364	Construction ongoing	Matching funds are available	None
Ctr. for Arid Land Studies, New Mexico State University --Las Cruces, NM--	22,600	11,600	11,000	3,682	7,318	Design work ongoing; construction to be initiated in late 1996	Some matching funds secured with remainder anticipated to become available in November 1996	None
Library/Herbarium, New York Botanical Gardens --New York, NY--	26,000	13,000	13,000	13,000	0	Design work ongoing	A majority of matching funds are available	None
Center for Research on Human Nutrition/Chronic Disease Prevention, Wake Forest University --Winston-Salem, NC--	99,577	50,607	48,970	17,108	31,862	Construction ongoing	In-kind matching contributions were accepted by CSREES	None
Animal Care Facility, North Dakota State University --Fargo, ND--	10,000	5,000	5,000	1,918	3,082	Design underway	Majority of matching funds have not yet been obtained	None

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Lake Erie Soil & Water Research & Education Center, University of Toledo --Toledo, OH--	5,600	2,800	2,800	492	2,108	Design work nearly complete	Matching made available through State appropriations in 1994	None
Grain Storage Research/Extension Center, Oklahoma State University --Stillwater, OK--	990	495	500	495	5	Design work initiated	During the facility study, it became known that matching was not yet available and that it would not be requested from the State due to other construction priorities. The university will rely on contributions from industry, which is a concern since the university may not have obtained the match on a previously-funded facility project --Beef Cattle facility-- for which industry contributions were also anticipated	No assurance of matching availability
Forest Ecosystem Research Laboratory, Oregon State University --Corvallis, OR--	24,000	12,000	12,000	5,000	7,000	Design work to be initiated in 1996	All matching funds are available	The facility study team concluded that the \$24m total cost appears higher than necessary to design and construct the proposed facility. A large amount of proposed costs are for items that do not relate, or are peripheral, to the construction effort

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Center for Food Marketing, St. Joseph's University --Philadelphia, PA--	25,600	13,200	12,400	12,400	0	Construction to be initiated in 1996	All matching funds are available.	None
Coastal Institute on Narragansett Bay, University of Rhode Island --Kingston--	27,000	14,500	12,500	12,500	0 C/	Some design and some construction have been completed on this multi- building project	Costs previously incurred by the University on two components of this project have tentatively been accepted by CSREES -- additional information regarding those costs has been requested from the University-- The match will be met if all costs are deemed acceptable by CSREES	None
Animal Resource Wing, South Dakota State University --Brookings, SD--	10,800	5,400	5,400	2,700	2,700	Design work to be initiated in 1996	All matching funds are available	None
Agricultural, Biological, & Environmental Research Complex, University of Tennessee --Knoxville, TN--	38,500	19,250	19,250	7,684	11,566	Start of construction pending release of State funding	Matching funds of \$5-6 million are available now, the balance to be pursued from State appropriations	None
Southern Crop Improvement, Texas A&M University --College Station, TX--	14,500	7,500	7,000	2,492	4,508	Design work ongoing. Construction to be initiated in 1996	All matching funds are available	None

FACILITY/LOCATION	TOTAL ESTIMATED PROJECT COST --\$000--	ESTIMATED NONFEDERAL SHARE OF TOTAL COST --\$000--	ESTIMATED FEDERAL SHARE OF TOTAL COST --\$000--	FEDERAL FUNDING TO DATE --\$000--	REMAINING FEDERAL SHARE --\$000--	STATUS OF PROJECT	STATUS OF NONFEDERAL MATCHING	ISSUES
Rural Community Interactive Learning Center, University of Vermont --Burlington, VT--	3,771	1,866	1,866	2,000	0	Design completed, construction underway	All matching funds are available	None
Animal Disease Biotechnology Facility, Washington State University --Pullman, WA--	\$2,062	28,662	23,400	13,822	7,578	Construction ongoing	All matching funds are available	None
Wheat Research Facility, Washington State University --Pullman, WA--	7,354	3,677	3,677	3,677	0	Construction to be initiated in 1996	All matching funds are available	None

FOOTNOTE:

- A/ During the facility study conducted by CSREES in 1995 --and as indicated in the CSREES report to Congress--, the institution indicated that the total Federal subsidy was \$5,784,000 but a subsequent proposal submitted by the university indicates the Federal share is \$6,000,000.
- B/ The FY 1996 Senate Report No. 104-142 indicates that \$1,000,000 was provided for the final phase of the Camali Hall project at the University of Arkansas. It is further indicated that, due to budgetary constraints, the funds provided for this project may be redirected to complete another project initiated under this program at the University of Arkansas, if that project is determined to be of higher priority. The University of Arkansas has proposed to CSREES that these funds be redirected to a Livestock Facility project for which CSREES conducted a facility study in 1993 but which has never received funding. CSREES has requested that the University submit a proposal related to the Livestock Facility. It should also be noted that funds in the amount of \$946,000 were appropriated for the Camali Hall project in fiscal year 1995 but were not awarded by the agency. It is expected that the fiscal year 1995 funds will also be redirected to the Livestock Facility project unless other directions are provided by the Appropriations Committees of the Congress.
- C/ Although the FY 1996 Conference Report indicates that federal funding for this project is completed, the institution has submitted a proposal in 1996 indicating that the Federal share is still \$19,194,000.

FY 1997 BUDGET REQUEST

Question: Please provide for the record a comparison of the FY 1997 budget request for CSREES to that submitted by the agency to the Department and the request submitted by the Department to the Office of Management and Budget.

[The information follows.]

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

FY 1997 PRESIDENT'S BUDGET

--Dollars in Thousands--

Programs	FY 1996 Appropriations	FY 1997 Agency Estimates	FY 1997 Department Estimates	FY 1997 President's Budget
Research and Education Activities:				
Base Programs:				
Hatch Act	168,734	178,156	171,304	168,734
McIntire-Stennis Cooperative Forestry	20,497	21,641	20,809	20,497
Evans-Allen Program	27,735	29,283	28,157	27,735
Animal Health & Disease, Section 1433	5,051	5,773	5,551	5,051
Subtotal	222,017	234,853	225,821	222,017
Special Research Grants:				
Critical Issues	200	500	500	200
Energy Biomass/Biofuels	0	750	750	0
Global Change	1,615	3,500	3,500	1,615
Minor Use Animal Drugs	550	550	550	550
National Biological Impact Assessment Program	254	300	300	254
Rural Development Centers	423	450	450	423
Water Quality	2,757	4,500	4,500	2,757
Other	44,047	0	0	0
Subtotal	49,846	10,550	10,550	5,799
Improved Pest Control:				
Emerging Pest & Disease Issues	0	9,200	4,200	4,200
Expert IPM Decision Support System	0	300	300	300
Integrated Pest Management & Biological Control	2,731	11,000	8,000	8,000
IR-4 Minor Crop Pest Management (Pesticide Clearance)	5,711	15,000	15,000	10,711
Pesticide Impact Assessment	1,327	2,968	2,968	1,327
Subtotal	9,769	38,468	30,468	24,538
National Research Initiative Competitive Grants Program --NRI--:				
Natural Resources & the Environment	17,650	27,000	26,775	27,000
Nutrition, Food Safety, & Health	7,400	11,000	10,200	11,000
Plants	37,000	47,000	45,900	47,000
Animals	23,750	29,500	29,325	29,500
Markets, Trade, & Rural Development	4,000	6,500	6,375	6,500
Processing for Adding Value/Developing New Products	6,935	9,000	8,925	9,000
Subtotal	96,735	130,000	127,500	130,000

Other Research:				
1890 Institution Capacity	9,200	10,550	10,550	9,200
Building Grants				
Aquaculture Centers	4,000	4,333	4,333	4,000
Critical Agricultural Materials	500	0	0	0
Competitively Applied Research	0	15,000	7,500	0
Federal Administration (Direct Appropriation)	10,337	4,081	3,915	1,993
Rangeland Research	475	475	475	475
Supplemental & Alternative Crops	650	2,250	2,250	650
Sustainable Agriculture Program	8,100	9,500	9,500	8,100
Subtotal	33,262	46,189	38,523	24,418

Research and Education**Activities continued:**

Higher Education:

Graduate Fellowship Grants	3,500	4,000	3,500	3,500
Hispanic Education	0	1,500	1,500	1,500
Partnership Grants				
Institution Challenge Grants	4,350	5,000	5,000	4,350
Multicultural Scholars Program	1,000	2,000	1,000	1,000
Subtotal	8,850	12,500	11,000	10,350

Native American Endowment Fund	4,600	4,600	4,600	4,600
Native American Institutions	1,450	0	0	1,450
	6,050	4,600	4,600	6,050

Total, Research & Education	426,529	477,160	448,462	423,172
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Buildings & Facilities	57,838	0	0	0
Competitive Buildings & Facilities	0	35,000	15,000	0
Total, Research & Education Activities	484,367	512,160	463,462	423,172

Extension Activities

Smith-Lever Formula 3b&c	268,493	283,485	272,582	268,493
1890 Institutions	25,090	27,285	26,236	25,090
Smith-Lever 3d				
Water Quality	11,065	11,234	11,234	11,065
Youth & Families at Risk	9,850	10,000	10,000	9,850
Food Safety	2,438	2,475	2,475	2,438
Nutrition Education	0	4,265	4,265	0
Farm Safety	2,943	988	988	988
Pest Management	10,783	21,000	15,000	15,000
Pesticide Impact Assessment	3,313	3,363	3,363	3,313
Pesticide Applicator Training	0	2,000	2,000	0
EFNEP	60,510	63,888	61,431	60,510
Rural Development Centers	936	950	950	936
Indian Reservations Extension Agents	1,724	1,750	1,750	1,724
Sustainable Agriculture	3,411	4,963	4,963	3,411
Renewable Resources Extension Act	3,291	3,341	3,341	3,291
Ag Telecommunications	1,203	1,221	1,221	1,203
Rural Health & Safety	2,709	2,750	2,750	2,709
1890 Facilities (Section 1447)	7,782	15,000	15,000	7,782
Federal Administration	12,209	5,511	5,344	5,685
Total, Extension Activities	427,750	465,469	444,893	423,488
Total, Cooperative State Research, Education, and Extension Service	912,117	977,629	908,355	846,660

QUESTIONS SUBMITTED BY SENATOR BOND

EXTENSION AND CONSERVATION TECHNOLOGY

Question: The Agricultural Extension Service has provided American farmers and ranchers with significant inputs of information and new technology over the years. Interest in improving environmental quality seems to be ever increasing. New technologies such as precision farming and conservation tillage are major production tools to improve environmental quality. What programs does the Extension Service have in place to introduce and promote these technologies to farmers and ranchers?

Answer: The Cooperative State Research, Education and Extension Service extends into every state and territory through the network of Agricultural Experiment Stations and State Extension Offices. New technologies are introduced through a combination of federal, state and private funding of activities including experiment station field days and tours, workshops, publications, radio and TV programs, and demonstration farms.

Some of the most successful precision farming and conservation tillage programs have been conducted in the Midwest, including Missouri. The Missouri project involves research on development of hardware and software, agronomic applications, impact on soil and water quality and implementation of the new technology by working with the users (producers).

Question: What are your plans for the future?

Answer: The Cooperative State Research, Education and Extension Service plans to work with partner agencies, industry, producers, universities, and interested parties to design and implement economical, environmentally friendly and sustainable agricultural production systems. Use of the site-specific and conservation tillage processes with application of remote sensing, geopositioning satellite systems, spot-spray and material applicator technologies will improve the efficiency and economics of American agriculture.

Question: Does the Extension Service consider these technologies of value for improving the environment, and if so, in what ways?

Answer: Conservation tillage or minimum tillage results in significant reduction in soil loss from erosion, conserves water and reduces fuel and labor requirements. In Missouri alone, nearly five million acres (NRCS data) use some form of minimum tillage and more than two million acres are in no-till. Nationally, more than 40 million acres are in no-till.

While precision farming is a rather new technology, indications are that precision farming can reduce the use of herbicides and pesticides, improve the efficiency of fertilizers used and reduce pollution of the environment. Both conservation tillage and precision farming are environmentally friendly.

Questions: How does the Extension Service coordinate its environmental/conservation programs with other agencies, such as the NRCS, who play a lead role in implementing USDA's environmental/conservation policies?

The Cooperative State Research, Education and Extension Service (CSREES) is USDA's education and outreach arm. In addition, we provide the Department's formal linkage to the research, teaching, and extension capacity of the land-grant system. For these reasons, we have a strong comparative advantage in our ability to design, craft, and deliver education and research programs. By utilizing the existing infrastructure of the land grant system and its county adjuncts, we have access to a remarkably cost-effective mechanism through which to carry out our work. To the extent possible, we try to coordinate our efforts with those of other agencies in USDA so that the entire Department can profit from our state and local relationships.

CSREES is an active member of the Working Group on Water Quality which coordinates the research and extension activities for USDA agencies with active programs. The Natural Resources Conservation Service is a member of the Working Group also.

The CSREES program leaders have active cooperative projects with NRCS and ARS through the Water Quality program, Management Systems Evaluation Area program and the Hydrologic Unit Areas and Demonstration projects. In addition, CSREES and NRCS targeted collaborative interagency projects across the country which focus on specific water quality problems of local watersheds. This ongoing effort includes other entities in a broad partnership: FSA, EPA, USGS, state soil and water conservation districts, other state agencies, and private entities are also involved. These projects have used education, technical assistance, and financial assistance to achieve accelerated adoption by farmers and ranchers of cost-effective science-based production practices and systems that maintain environmental integrity.

Beyond water quality, CSREES is currently participating with NRCS and other USDA agencies to implement programs of the new Farm Bill. We are actively seeking to provide input to the educational components of such programs as the Environmental Quality Incentives Program (EQIP), the Wildlife Habitat Incentives Program (WHIP), and the Conservation of Private Grazing Lands program. Our state partners, represented by the land-grant universities, are enthusiastic regarding these programs and are relying on CSREES to provide representation and leadership to enable the universities to participate.

In addition to NRCS, we also work effectively and closely with the Forest Service. Together with the Forest Service, CSREES coordinates the Forestry Research Advisory Council (FRAC), an entity charged with providing advice to the Secretary regarding forestry research needs. We also work with the Forest Service on a number of extension forestry issues, on joint program reviews, and in facilitating certain FS programs at local level through Extension office.

QUESTIONS SUBMITTED BY SENATOR GORTON

COOL SEASON FOOD LEGUME RESEARCH PROGRAM

Question: The Cool Season Food Legume Research Program is funding scientists throughout the country in a team approach to solving the problems associated with legume production throughout the country. Could you comment on this program and the success of using a scientific team approach to problem solving.

Answer: The Special Research Grant for Cool Season Food Legume Research has brought together scientists representing the major production areas for these crops as well as the appropriate scientific disciplines to plan a comprehensive and coordinated cooperative research program. Because the participating scientists already had support funds from other sources for this project, such as States' appropriations and /or industry funds, this enhanced the effect of what could be accomplished with just the amount of the grant. Use of a scientific team approach made this program a model of what can be accomplished when the critical issues which impact management information. In this case, the information is being successfully utilized by growers to compete in the international marketplace.

FUND FOR RURAL AMERICA

Question: The farm bill also provides mandatory funding for a competitive agricultural research grants program. One hundred million dollars in unappropriated Treasury funds will be transferred into the "Fund for Rural America" in 1997, 1998, and 1999. One third of the funds is to be awarded competitively for research. What are the Administration's priorities for research within the Funds for Rural America? Where will the research priorities be set? In Washington, D.C. or at the local level? What agency(s) will administer the research?

Answer: The Administration is considering how the Fund for Rural America might be implemented. We believe that the orientation of the Fund is to "solve problems" and "create new opportunities" in agriculture and rural communities, particularly to assist in the transition away from commodity programs to markets. Because the Fund is a short-term (3 year) opportunity, the Administration sees great benefit in utilizing the Fund to invest in unique, high-impact, high-risk, innovative research, education and extension projects and programs that are not currently funded by our existing portfolio of research and education grant programs.

The "problems" should be primarily national in scope and/or national in impact. The "problems" we are considering include: Reducing Production Risks, Assisting Farmers, Rural Communities and Related Industries to Transition away from Commodity Programs to Markets, Managing Environmental Quality, Small Business Development in Rural Communities, and Accessing the Information Superhighway.

Within the broad problem areas, proposals will be solicited that address one or more of the purposes listed in the law. The purposes are:

- 1) increase international competitiveness, efficiency, and farm profitability;
- 2) reduce economic and health risks;
- 3) conserve and enhance natural resources;
- 4) develop new crops, new crop uses, and new agricultural applications of biotechnology;
- 5) enhance animal agricultural resources;
- 6) preserve plant and animal germplasm;
- 7) increase economic opportunities in farming and rural communities; and
- 8) expand locally-owned value-added processing.

In addition, the Fund would support projects that explicitly integrate research, education and extension activities along a continuum throughout the project.

As required by the law, we intend to consult with the National Agricultural Research, Education, Extension and Economics Advisory Board to establish criteria for allocating grants based on the priorities of the Fund. The Advisory Board was created by the 1996 Farm Bill and is comprised of 30 members representing a variety of agricultural interests.

The research priorities will be set by USDA with considerable input from the research, education and extension community. Just after the Farm Bill was signed into law, we held a meeting with the leadership of the Land Grant University to discuss the implementation of the Fund for Rural America among other issues. We have also been in contact with numerous farm and commodity organizations over the past several weeks receiving their input and suggestions for the Fund.

The research portion of the Fund for Rural America will be administered by the Cooperative State Research, Education, and Extension Service (CSREES) as indicated in the 1996 Farm Bill. The specific functions of the administration of the Fund will be conducted by the Competitive Research Grants and Awards Management program within CSREES.

BUILDINGS AND FACILITIES

Question: In the Administration's FY 1997 budget request, it proposes to eliminate funding for the CSREES Building and Facilities Account. I am curious as to why the Administration would put forward, yet again, a proposal to zero out this account. In many --if not most-- instances funding agreements have been reached between the universities and the USDA to complete construction of the facilities. Don't you think that a more responsible approach would be to say, prioritize the existing facilities currently under construction, finish these facilities, and adopt a "no new start" policy? Does the Administration honestly think that this Subcommittee will just pull the rug out from under these projects currently in the process of being completed to leave the Universities hanging in the lurch?

Answer: We do not prioritize projects that are not recommended in the President's budget through a nationally competitive, merit review process. However, we evaluate the Congressionally recommended projects based upon their relationship to the mission of the U.S. Department of Agriculture; the local, regional, national or international impact of the proposed facility; the local commitment to the programs to be housed in the completed space; and the grantee's ability to provide matching funds from non-Federal sources. However, because we believe that the current budget climate calls for making funding choices which best reflect national and international interests, we have not proposed to continue funding facility grants through the existing process. Providing federal support for university facility projects that have not passed through a competitive selection process may not be the best use of our current resources. The Administration proposed a competitive, merit-based facility grant program in its guidance for the 1996 Farm Bill.

Question: How does the Administration propose we complete these half-completed facilities in lieu of their budget request?

Answer: The Department has proposed legislation to establish a competitive facilities grant program, and while it was not included in the recent farm bill, we will continue to recommend it as Congress considers additional substantive legislation for research in USDA.

Question: Please provide me a status of each facility currently under construction, including the funds appropriated to date, and remaining funds needed to complete construction of each facility.

[The information follows.]

Cooperative State Research, Education, and Extension Service
U.S. Department of Agriculture

STATUS OF FUNDING

CSREES BUILDINGS AND FACILITIES PROGRAM—Fiscal Year 1996

3/1/96 (Rev.)

Name and Location of Facility	Federal Funds Requested (\$000)	Federal Funding FY 1996 (\$000)	Total Federal Funding To Date (\$000)	Additional Federal Funds Requested (\$000)
Poultry Science Facility AUBURN UNIVERSITY (Auburn, AL)	6,000	1,338	1,860	4,140
Carnall Hall UNIVERSITY OF ARKANSAS (Little Rock)	3,000	1,000	1,946	1,054
Alternative Pest Control Containment/Quarantine Facility UNIVERSITY OF CALIFORNIA (Davis/Riverside) ¹	17,500	3,057	7,421	10,079
Agricultural Biotechnology Laboratory UNIVERSITY OF CONNECTICUT (Storrs)	10,000	1,347	1,915	8,085

Name and Location of Facility	Federal Funds Requested (\$000)	Federal Funding FY 1996 (\$000)	Total Federal Funding To Date (\$000)	Additional Federal Funds Requested (\$000)
Poultry Biocontainment Laboratory UNIVERSITY OF DELAWARE (Newark)	3,500	1,751	3,500	0
Aquatic Food Products Facility UNIVERSITY OF FLORIDA (Gainesville) ²	1,500	1,500	1,500	0
Biotechnology Center NORTHWESTERN UNIVERSITY (Evanston, IL)	12,000	1,366	6,536	5,464
Animal Research Facilities LSU (Franklinton, LA) and MSU (Poplarville, MS)	1,280	1,280	1,280	0
Institute for Natural Resources and Environmental Science UNIVERSITY OF MARYLAND (Statewide)	10,000	2,288	7,712	2,288
Center for Hunger, Poverty, and Nutrition Policy TUFTS UNIVERSITY (Boston, MA)	12,272	1,641	7,350	4,922
Center for Water and Wetlands Resources THE UNIVERSITY OF MISSISSIPPI (Oxford)	3,255	1,555	3,255	0
National Food Service Management Institute THE UNIVERSITY OF MISSISSIPPI (Oxford)	3,000	3,000	3,000	0

Name and Location of Facility	Federal Funds Requested (\$000)	Federal Funding FY 1996 (\$000)	Total Federal Funding To Date (\$000)	Additional Federal Funds Requested (\$000)
Center for Plant Biodiversity MISSOURI BOTANICAL GARDEN (St. Louis)	7,913	3,995	4,752	3,161
Center for Molecular Biology RUTGERS UNIVERSITY (New Brunswick, NJ)	37,200	2,262	16,836	20,364
Center for Arid Land Studies NEW MEXICO STATE UNIVERSITY (Las Cruces)	11,000	1,464	3,682	7,318
Library/Herbarium NEW YORK BOTANICAL GARDEN (Bronx)	13,000	1,665	13,000	0
Ctr. for Rsch. on Human Nutr. & Chronic Disease Prevention WAKE FOREST UNIVERSITY (Winston-Salem, NC)	48,970	3,000	17,108	31,862
Grain Storage Research and Extension Center OKLAHOMA STATE UNIVERSITY (Stillwater) ³	500	495	495	5
Forest Ecosystem Research Laboratory OREGON STATE UNIVERSITY (Corvallis) ⁴	12,000	5,000	5,000	7,000
Center for Food Marketing ST. JOSEPH'S UNIVERSITY (Philadelphia, PA)	12,400	2,438	12,400	0

Name and Location of Facility	Federal Funds Requested (\$000)	Federal Funding FY 1996 (\$000)	Total Federal Funding To Date (\$000)	Additional Funds Requested (\$000)
Coastal Institute on Narragansett Bay UNIVERSITY OF RHODE ISLAND (Kingston) ⁵	19,194	3,854	12,500	6,654
Animal Resource Wing SOUTH DAKOTA STATE UNIVERSITY (Brookings)	5,400	2,700	2,700	2,700
Agricultural, Biological, & Environmental Research Complex UNIVERSITY OF TENNESSEE (Knoxville)	19,250	1,928	7,684	11,566
Center for Southern Crop Improvement TEXAS A&M UNIVERSITY (College Station)	7,000	1,400	2,492	4,508
Rural Community Interactive Learning Center UNIVERSITY OF VERMONT (Burlington) ⁶	1,886	2,000	2,000	0
Animal Disease Biotechnology Facility WASHINGTON STATE UNIVERSITY (Pullman)	23,400	1,263	15,822	7,578
Wheat Research Facility WASHINGTON STATE UNIVERSITY (Pullman) ⁷	3,000	3,251	3,677	0
TOTALS	305,420	59,834	167,423	138,748

FOOTNOTES:

- ¹ Although FY 1996 Conference Report indicates that Federal funding for this project is completed, the institution has submitted a proposal in 1996 requesting that the amount of the Federal subsidy increase to \$18,350,000.
- ² During the facility study conducted by CSREES in 1995 (and as indicated in the CSREES report to Congress), the institution clarified that the total Federal subsidy was \$1,500,000 rather than \$2,050,000 as initially reported.
- ³ During the facility study conducted by CSREES in 1995 (and as indicated in the CSREES report to Congress), the institution clarified that the total Federal subsidy was \$500,000 rather than \$495,000 as initially reported.
- ⁴ During the facility study conducted by CSREES in 1995 (and as indicated in the CSREES report to Congress), the institution clarified that the total Federal subsidy was \$12,000,000 rather than \$10,000,000 as initially reported.
- ⁵ Although the FY 1996 Conference Report indicates that Federal funding for this project is completed, the institution has submitted a proposal in 1996 indicating that the Federal subsidy is still \$19,194,000.
- ⁶ During the facility study conducted by CSREES in 1995 (and as indicated in the CSREES report to Congress), the institution clarified that the total Federal subsidy was \$1,886,000 rather than \$7,000,000 as initially reported.
- ⁷ During the facility study conducted by CSREES in 1995 (and as indicated in the CSREES report to Congress), the institution confirmed that the Federal subsidy was \$3,000,000 as initially reported.

QUESTIONS SUBMITTED BY SENATOR BURNS

FARM PROGRAMS

Question: What is your agency doing to assist the farmer making the transition from the former farm programs to the new farm programs?

Answer: CSREES and its land grant university partners are working closely with FSA to assure that farmers and landowners have current information about farm program changes and the management implications of these changes. We are also working with FSA and NRCS in educating farmers about new conservation programs. In the longer run we will be substantially strengthening risk management research and education programs to meet changing needs of farmers in a more market-oriented agriculture.

Question: Where does the cooperation between the state and the federal government come into effect?

Answer: CSREES is a major source of information to and coordinator of educational programs through the land grant system for farmer audiences. We have worked closely with the Congress and USDA agencies in carrying out these roles. In addition to strong cooperation between CSREES, FSA and NRCS at the national level, these are effective working relationships between state FSA and NRCS offices, Cooperative Extension Service county offices and the land grant universities. Training sessions as well as educational programs for farmers include personnel from all three agencies. To keep land grant university colleagues apprised of the latest ideas and changes, several electronic reports are sent each week and numerous telephone inquiries are answered. Copies of bills, amendments and the final act have been posted on the Internet. Colleagues also are kept up to date on analyses prepared by university staffs and others around the country. Land grant staff analyses also are provided to USDA agencies for use in the implementation process.

ECONOMIC RESEARCH SERVICE
QUESTIONS SUBMITTED BY SENATOR COCHRAN
PESTICIDE DATA ACQUISITION AND ANALYSIS

Question. The FY 1997 budget increase requests an increase of \$1.067 million for Economic Research Service (ERS) data acquisition and analysis of farm practices and pesticide use linked to environmental conditions and economic performance of farmers.

What portion of the increased funding requested is essentially tied to the National Agricultural Statistics Funding proposed fiscal year 1997 funding initiative (i.e, the integrated pest management survey, and the post-harvest pesticide and expanded pesticide use data collection proposals)? Which of the data analysis and research efforts you are proposing to fund are distinct from these additional data collection efforts?

Answer. The ERS budget increase requested to support the collection of economic data and to carry out economic analysis complements the NASS request which, in turn, is a proposal to conduct a national survey of farm pesticide use. The NASS request would provide basic descriptive information and a comprehensive picture of total pesticide use at the national level. While this would be a valuable base of information from which to measure change, additional data are required to evaluate the effectiveness of policies and practices aimed at achieving conservation goals and to estimate the costs and benefits of adopting alternative farming practices.

Because IPM, tillage, and water management practices vary by soil type, slope, and climate, we need data on both the type of practices adopted and farmers' resource characteristics. The proposed data acquisition component of the request, \$800,000, would be used to enhance data collection in environmentally sensitive areas to link farming practices data such as pest management, nutrient management, conservation tillage, and irrigation management with resource condition data such as priority conservation areas, water management areas, and highly erodible soils. Specifically, these additional funds would be used to collaborate with NASS to further develop the Agricultural Resource Management Study --ARMS-- survey instrument which integrates ERS's Farm Costs and Returns Survey and the Cropping Practices Survey. The remainder of the requested funds would be used to fund economic analyses of the data. This would allow ERS to evaluate practices farmers adopt and the implications of these practices on the costs of production.

The portion of the proposed increase in ERS funding going to data collection would allow for a larger sample, more comprehensive crop coverage or denser sampling in environmentally sensitive areas. The portion of the increased funding devoted to analysis using this focused information would be useful for both the Farm Services Agency and the Natural Resources and Conservation Service in making their conservation programs more cost-effective.

RESEARCH AGENDA PRIORITIES

Question. The Economic Research Service performs research and analyses requested by USDA agencies, other federal, and non-federal organizations. How does the Economic Research Service set its research agenda and prioritize its work? Are all

requests honored? If not, who determines this? Is all work requested by USDA agencies and non-federal organizations performed on a reimbursable basis?

Answer. ERS is committed to producing products that are responsive to clients and customers' needs. In keeping with this goal, ERS started a major strategic planning process in 1994 in response to downsizing and the Government Performance and Results Act in order to take stock of current and emerging situations with a perspective of how best to fulfill its mission for the future. That planning process has resulted in a reorganization of the Agency's structure and program and development of performance outcomes and goals. The reorganization reflects the seven mission areas established under USDA's new organizational structure by focusing on commercial agriculture in a global sense, food and consumer economics, natural resources and the environment, rural development, and food safety and marketing. In addition, ERS will continue its energy and new uses program.

ERS has established a program of research and analysis to cover the USDA mission areas and to develop objective economic information and appraisals that serve decisionmakers across the Government and in the public as they confront emerging issues. Thus we expect and invite requests from other agencies and other organizations for research and analysis. Because we have aligned our research and analysis with program mission areas, we find that a large proportion of requests are consistent with ERS's program priorities and can be honored. Requests that are beyond the Agency's capacity to respond with existing resources, especially those requiring collection of new or additional data or substantial new analysis, are the basis for negotiating reimburseables. Those requests that are inconsistent with ERS priorities and/or beyond the resource capacity of the Agency, are turned down unless the requesting organization is willing to reimburse the cost. Those decisions are made at division or agency management levels depending on the scope of work requested and the source of the request. Since the significance of reimbursable work in relation to overall ERS resources has grown, we have initiated a review to clarify reimbursable policies for work performed primarily as the behest of other agencies.

STAFF-YEARS

Question. Dr. Offutt, you indicate in your prepared testimony that ERS has had a hiring freeze in effect for the past 3 years to reduce it staff to a level that could support a \$53 million program. You note that as of March 1996, ERS has accomplished this and now is within its employment ceiling of 620 staff-years. I note from the budget justification, however, that the number of staff years supported at the \$53 million appropriations level is 580 for fiscal year 1995 and 579 for each of fiscal years 1996 and 1997, well below the 620 staff-year ceiling you cite. It is only with the additional staff-years funded through reimbursements received by other federal and non-federal agencies, that ERS reaches a staff-year ceiling of 620--and this is at a total program level of \$61 to \$63 million.

Would you please explain how the staff ceiling set for ERS works? If, for example, you receive \$65,000 and 1 staff-year from funds appropriated to the National Agricultural Statistics Service, as the budget indicates, is this additional staff-year counted against your staff-year ceiling and one less is counted against that of the National Agricultural Statistics Service? Please explain.

Answer. It is correct that direct appropriations support 579 staff-years. Reimbursements are required to support 620 staff years. ERS like other USDA agencies, typically has a staff-year ceiling that is funded through a combination of direct appropriations and reimbursements. The staff-year ceiling set for ERS in 1997 reflects our ongoing mission to provide economic and social science information and analysis on agriculture, food, natural resources and rural America within budget constraints.

With regard to adjustments in staff year ceilings, we typically receive no increase in our staff-year ceiling with reimbursements, although that can be negotiated.

ELECTRONIC INFORMATION DISSEMINATION

Question. Ms. Offutt, you indicate in your prepared testimony that ERS is increasing its use of new technologies to offer commodity reports, situation and outlook reports, and other information electronically. Will this be more cost-effective for the Agency as well as the user?

Answer. Our experience with all forms of electronic information dissemination, including fax-on-demand, bulletin board systems, distribution of data on personal computer diskettes and CD-ROMs, and distribution on the Internet, indicates that these programs are very cost-effective for both users and the Agency. These systems are delivering more, and more timely ERS information and data to users than ever before, and most of our electronic materials are free to the user. At the same time, the Agency realizes savings by taking advantage of the new technologies to develop more efficient, effective, and timely internal processes for the development and delivery of its products. Also, our partnerships with other USDA agencies and with land-grant universities for electronic dissemination has resulted in further savings. These savings have enabled ERS to reduce staff in the publication, production and dissemination areas by 25 percent since 1993.

USERS OF ERS' WORK

Question. Who are the principal users of ERS' work? How does ERS assess, on a continuing basis, that its research and analysis are of benefit to the intended users of its products?

Answer. ERS' work informs both public and private decisions on agriculture, food, natural resources, and rural America. Accordingly, the Congress, the Administration, State governments, and other government entities are principal users of our research, analysis, and data. Other users of our work, who are concerned with public issues, include individuals and organizations such as consultants, journalists, industry associations, consumer organizations, and other interest groups. Businesses, farmers and ranchers, investors, and consumers use ERS products directly and indirectly to provide a factual basis for their decisions in areas related to our work.

We continuously assesses the usefulness of its outputs to users through involvement in interagency and intergovernmental activities, formal and informal meetings with users and user groups, daily staff contact with users, and a customer

service program, including an order desk for ERS products and an Information Center. All of these contacts with users provide information that we use to focus Agency resources on important current issues and to identify and address important emerging issues.

Under our strategic planning processes which were initiated in 1994 in response to the Government Performance and Results Act-GPRA, program assessment will be enhanced as part of our program in the coming years. To do this, we will develop agency quality standards that establish acceptable levels of performance, solicit external peer reviews of research programs, consult with customers and stakeholders, monitor the completion rate of products committed to in plans, and prepare annual performance reports. This will make our ongoing program of evaluation more rigorous and transparent

RESEARCH AND DEVELOPMENT CONTACTS

Question. Please provide a list of all research and development contracts funded in FY 1995 and planned for fiscal year 1996. Please list the purpose of each contract funded, who is performing the work and the amount of each contract.

Answer. The Economic Research Service is an intramural research agency and as such we do not normally contract out any research and development work. ERS did not fund any contracts in FY 1995 and we do not plan to in FY 1996. All ERS research is done in-house or cooperatively with universities and other research institutions.

RESEARCH STUDIES

Question. Please provide a list of all research studies undertaken in fiscal year 1995 and fiscal year 1996 to date, indicating who requested the study, whether the work is being performed in-house or by contract, the cost of the study, and whether the study is being funded on a reimbursable or non-reimbursable basis.

Answer. Our cost accounting for research studies is done by program area; that is, a subject-matter area of work is allocated funds based on a plan of work for the year that may include several research studies in addition to creating the research capital necessary which includes data collection, developing economic indicators, and specialized staff training. Accordingly, we will provide a list of program areas and their allocation of funds for FY 1995 for the record. The allocation is essentially unchanged for FY 1996. We will also provide a list of the monographs that came out of these program areas in FY 1995 and FY 1996 to date. In-house studies also include a number of Congressionally mandated studies, of which we will also provide a list for FY 1995 and FY 1996 to date. The costs of these studies are absorbed by the program areas to which they are assigned. Finally, we will provide a list of work performed for others on a reimbursable basis and the amount for each project.

[The information follows:]

Program Areas	FY 1995 Funds* (Million dollars)
Animal Products	1.7
Asia/Western Hemisphere	2.4
Energy and New Uses for Agricultural Products	.9
Environmental Indicators and Resource Accounting	1.6
Europe/Africa/Middle East	1.8
Farm Business	2.4
Field and Specialty Crops	2.3
Finance and Development	1.5
Food Safety	.9
Food Marketing and Distribution	1.2
Food Consumption, Nutrition and Food Assistance	1.2
Industry	1.3
Natural Resource Conservation and Management	1.7
Population, Labor, and Income	1.7
Production Management and Technology	1.4
Resource and Environmental Policy	2.4
Trade Analysis	2.4

*Excludes indirect costs.

The following list of monographs released in FY 1995 or the first half of FY 1996 is illustrative of the results of research studies conducted by ERS, but is only one of multiple ways that ERS disseminates information. Other ways include journal articles, conference papers, articles in ERS's own magazines (*Agricultural Outlook*, *Food Review*, *Rural Development Perspectives*, and *Rural Conditions and Trends*), situation and outlook reports, electronic publications and databases, briefings, and staff memoranda.

Agricultural Economics Reports

The New Generation of American Farmers: Farm Entry and Exit Prospects for the 1990's, AER-695, Oct. 1994, 38 pp.

Plant Biotechnology: Out of the Laboratory and Into the Field, AER-697, Apr. 1995, 13 pp.

Economics of Agricultural Management Measures in the Coastal Zone, AER-698, Feb. 1995, 45 pp.

The Benefits of Protecting Rural Water Quality: An Empirical Analysis, AER-701, Jan. 1995, 27 pp.

Commercial U.S. Feed Grain Farms: Financial Performance, 1987-91, AER-702, Feb. 1995, 28 pp.

World Agriculture and Climate Change: Economic Adaptations, AER-703, June 1995, 86 pp.

U.S.-Mexico Fruit and Vegetable Trade, 1970-92, AER-704, Apr. 1995, 141 pp.

- Dairy: Background for 1995 Farm Legislation*, AER-705, Apr. 1995, 46 pp.
- Cotton: Background for 1995 Farm Legislation*, AER-706, Apr. 1995, 30 pp.
- Federal Marketing Orders and Federal Research and Promotion Programs: Background for 1995 Farm Legislation*, AER-707, May 1995, 34 pp.
- Honey: Background for 1995 Farm Legislation*, AER-708, Apr. 1995, 31 pp.
- Tobacco: Background for 1995 Farm Legislation*, AER-709, Apr. 1995, 35 pp.
- Peanuts: Background for 1995 Farm Legislation*, AER-710, Apr. 1995, 30 pp.
- Sugar: Background for 1995 Farm Legislation*, AER-711, Apr. 1995, 68 pp.
- Wheat: Background for 1995 Farm Legislation*, AER-712, Apr. 1995, 46 pp.
- Rice: Background for 1995 Legislation*, AER-713, Apr. 1995, 54 pp.
- Feed Grains: Background for 1995 Farm Legislation*, AER-714, Apr. 1995, 71 pp.
- Oilseeds: Background for 1995 Farm Legislation*, AER-715, May 1995, 49 pp.
- Agricultural Export Programs: Background for 1995 Farm Legislation*, AER-716, June 1995, 30 pp.
- Pesticide and Fertilizer Use and Trends in U.S. Agriculture*, AER-717, May 1995, 47 pp.
- Purchase of Development Rights and the Economics of Easements*, AER-718, June 1995, 22 pp.
- Regulation, Innovation, and Market Structure in the U.S. Pesticide Industry*, AER-719, June 1995, 31 pp.
- Economic Analysis of Selected Water Policy Options for the Pacific Northwest*, AER-720, June 1995, 53 pp.
- Estimating the Net Energy Balance of Corn Ethanol*, AER-721, July 1995, 16 pp.
- The Role of Quality in Soybean Import Decisionmaking*, AER-722, Sept. 1995, 43 pp.
- Major Uses of Land in the United States, 1992*, AER-723, Sept. 1995, 39 pp.
- U.S. Hog Production Costs and Returns, 1992: An Economic Basebook*, AER-724, Nov. 1995, 55 pp.
- Life Insurance Company Mortgage Lending to U.S. Agriculture: Challenges and Opportunities*, AER-725, Dec. 1995, 59 pp.
- U.S. Barley Production Costs and Returns, 1992*, AER-726, Feb. 1996, 71 pp.
- Salmon Recovery in the Pacific Northwest: Agricultural and Other Economic Effects*, AER-727, Feb. 1996, 72 pp.
- Food Cost Review, 1995*, AER-729, Apr. 1996, 44 pp.
- Who are Retired Farm Operators?*, AER-730, Apr. 1996, 25 pp.

Staff Papers

- Economic Effects of Nitrogen in Rainfall on Cropland*, AGES-9423, Nov. 1994, 56 pp.
- Handbook of State-Sponsored Agricultural Credit Programs*, AGES-9426, Nov. 1994, 103 pp.
- Irrigated Agriculture and Environmental Pollution: Lessons from the Westside San Joaquin Valley, California*, AGES-9427, Dec. 1994, 47 pp.
- Russian Federation: Determinants of Corn Import Demand*, AGES-9501, Jan. 1995, 22 pp.
- Federal Commodity Programs and Returns to Irrigation in the West*, AGES-9502, Mar. 1995, 48 pp.

- The Application of Nonmarket Valuation Techniques to Agricultural Issues*, AGES-9503, Feb. 1995, 38 pp.
- Credit as a Factor Influencing Farmland Values*, AGES-9504, Mar. 1995, 18 pp.
- Venezuela: Determinants of Soybean Import Demand*, AGES-9505, Mar. 1995, 21 pp.
- Economic Issues Associated with Food Safety*, AGES-9506, Feb. 1995, 26 pp.
- The Economics of Food Assistance Programs*, AGES-9507, Jan. 1995, 39 pp.
- Intergovernmental Partnerships and Rural Development: An Overview Assessment of the National Rural Development Partnership*, AGES-9508, Apr. 1995, 45 pp.
- Comparative Social Measures of Subsidies to Agricultural Production*, AGES-9509, Apr. 1995, 10 pp.
- The Japanese Market for U.S. High-Value Products: Effects of the GATT-11 Agreement*, AGES-9511, June 1995, 33 pp.
- Urban Places in Nonmetro Areas: Historic Preservation and Economic Development*, AGES-9512, July 1995, 31 pp.
- Costs and Benefit of Cleaning U.S. Sorghum*, AGES-9513, Aug. 1995, 68 pp.
- Measuring Poverty: Do the Proposed Revisions of the Poverty Measure Matter for Rural America?*, AGES-9514, July 1995, 15 pp.
- The ES/WIC Nutrition Education Initiative: Progress in the First Year*, AGES-9515, Aug. 1995, 20 pp.
- Proposed Reforms in the Food Stamp Program: Economic Impacts on Agriculture and the Economy*, AGES-9516, Aug. 1995, 13 pp.
- Agricultural Research and Development: Public and Private Investments Under Alternative Markets and Institutions*, AGES-9517, Aug. 1995, 91 pp.
- Palm Oil Prospects for 2005*, AGES-9518, Aug. 1995, 19 pp.
- Business Assistance and Rural Development*, AGES-9519, Sept. 1995, 114 pp.
- Proposed Reforms in the Food Stamp Program: Economic Impacts on Agriculture and the Economy of the Work Opportunity Act of 1995*, AGES-9520, Sept. 1995, 20 pp.
- The Federal Budget and U.S. Competitiveness in World Markets: An Overview*, AGES-9521, Sept. 1995, 15 pp.
- Potential Implications of Climate Change for U.S. Agriculture*, AGES-9522, Oct. 1995, 24 pp.
- Food Aid Needs and Availabilities: Projections for 2005*, AGES-9523, Sept. 1995, 60 pp.
- The U.S. Avocado Industry*, AGES-9524, Oct. 1995, 26 pp.
- Private-Sector Agricultural Research Expenditures in the United States*, AGES-9525, Oct. 1995, 31 pp.
- An Evaluation of the Economic Importance and Value of Test Weight in Wheat in the U.S. Grain Marketing Channels*, AGES-9526, Nov. 1995, 64 pp.
- Weather and Yield, 1950-94: Relationships, Distributions, and Data*, AGES-9527, Dec. 1995, 161 pp.
- The U.S. Blueberry Industry*, AGES-9530, Dec. 1995, 39 pp.
- Conduct of Firms in Dynamic U.S. Food Industries*, AGES-9531, Dec. 1995, 21 pp.
- U.S. Hay Production*, AGES-9607, May 1996, 64 pp.

Agricultural Information Bulletins

- Consumer Concerns About Nutrition: Opportunities for the Food Sector*, AIB-705, Oct. 1994, 16 pp.
- Agriculture and the Environment in the European Union*, AIB-708, Oct. 1994, 14 pp.
- The Spice Market in the United States: Recent Developments and Prospects*, AIB-709, July 1995, 48 pp.
- Understanding Rural America*, AIB-710, Feb. 1995, 26 pp.
- The American Diet: Health and Economic Consequences*, AIB-711, Feb. 1995, 25 pp.
- Structural and Financial Characteristics of U.S. Farms, 1991: 16th Annual Family Farm Report to Congress*, AIB-712, June 1995, 63 pp.
- Financial and Structural Characteristics of CRP Enrollees, 1991*, AIB-713, May 1995, 15 pp.
- U.S. Farm and Farm-Related Employment in 1991*, AIB-714, Apr. 1995, 9 pp.
- Financial and Structural Characteristics of U.S. Commercial Cotton Farms, 1991-92*, AIB-715, June 1995, 19 pp.
- Voluntary Incentives for Reducing Agricultural Nonpoint Source Water Pollution*, AIB-716, May 1995, 11 pp.
- The Food Marketing System in 1994*, AIB-717, Aug. 1995, 14 pp.
- Soil Erosion and Conservation in the United States: An Overview*, AIB-718, Oct. 1995, 29 pp.
- Comparison of Agricultural Support in Canada, Mexico, and the United States*, AIB-719, Sept. 1995, 44 pp.
- Structural and Financial Characteristics of U.S. Farms, 1992: 17th Annual Family Farm Report to Congress*, AIB-721, Dec. 1995, 67 pp.
- Farm Credit System Safety and Soundness*, AIB-722, Jan. 1996, 29 pp.
- Size and Growth of the Nutritionally Improved Foods Market*, AIB-723, Apr. 1996, 41 pp.
- Issues in Agricultural and Rural Finance: Can Federal Action Improve Efficiency in the Market for Farm Loans?*, AIB-724-01, Mar. 1996, 4 pp.
- How Would Changes to the Earned Income Tax Credit Affect Rural Recipients?*, AIB-724-02, Apr. 1996, 4 pp.
- How Would Rural Areas Fare Under Block Grants?*, AIB-724-03, Apr. 1996, 4 pp.

Statistical Bulletins

- Food Spending in American Households, 1980-92*, SB-888, Oct. 1994, 74 pp.
- Dairy Yearbook: 1994 Supplement to Livestock, Dairy and Poultry Situation and Outlook*, SB-889, Aug. 1995, 32 pp.
- Estimates of Producer and Consumer Subsidy Equivalents: Government Intervention in Agriculture, 1982-92*, SB-913, Dec. 1994, 452 pp.
- The U.S. Strawberry Industry*, SB-914, Jan. 1995, 34 pp.
- Food Consumption, Prices, and Expenditures, 1970-93*, SB-915, Dec. 1994, 135 pp.
- Poultry Yearbook, 1994*, SB-916, Nov. 1994, 187 pp.
- Cotton Ginning Charges, Harvesting Practices, and Selected Marketing Costs, 1993/94 Season*, SB-918, Mar. 1995, 4 pp.
- Foreign Ownership of U.S. Agricultural Land Through December 31, 1994*, SB-919, June 1995, 49 pp.

- Red Meats Yearbook 1994*, SB-921, July 1995, 118 pp.
U.S. Cabbage Statistics, 1960-94, SB-923, Sept. 1995, 84 pp.
Dairy Yearbook, 1995, SB-924, Dec. 1995, 148 pp.
The Conservation Reserve Program: Enrollment Statistics for Signup Periods 1-12 and Fiscal Years 1986-93, SB-925, Nov. 1995, 102 pp.
U.S. Trends in Eating Away From Home, 1982-89, SB-926, Dec. 1995, 70 pp.
Poultry Yearbook, 1995, SB-927, Dec. 1995, 183 pp.
Food Consumption, Prices, and Expenditures, 1996: Annual Data, 1970-94, SB-928, Apr. 1996, 143 pp.
Cotton Ginning Charges, Harvesting Practices, and Selected Marketing Costs, 1994/95 Season, SB-929, Mar. 1996, 4 pp.

Technical Bulletins

- Product Differentiation in Wheat Trade Modeling*, TB-1838, June 1995, 25 pp.
An Evaluation of Fluid Milk and Cheese Advertising, 1978-93, TB-1839, Feb. 1995, 42 pp.
Dietary Fiber: Effects of Socioeconomic Characteristics and Knowledge, TB-1840, Dec. 1994, 13 pp.
U.S. Quarterly Demand for Meats, TB-1841, Feb. 1995, 38 pp.
Modeling Nutrient Intake: The Role of Dietary Information, TB-1842, May 1995, 24 pp.
Measuring the Economywide Effect of the Farm Sector: Two Methods, TB-1843, July 1995, 34 pp.
Accounting for the Environment in Agriculture, TB-1847, Oct. 1995, 27 pp.
Estimating the Opportunity Cost of Unpaid Farm Labor for U.S. Farm Operators, TB-1848, Mar. 1996, 23 pp.

Other Monographs

- NAFTA: An Early Assessment--A Report by the NAFTA Economic Monitoring Taskforce*, NAFTA-1, Oct. 1994, 47 pp.
NAFTA: An Early Assessment--A Report by the NAFTA Economic Monitoring Taskforce, NAFTA-2, Dec. 1994, 88 pp.
NAFTA: Year One--A Report by the NAFTA Economic Monitoring Taskforce, NAFTA-3, Apr. 1995, 62 pp.
NAFTA: What's Up? A Report by the NAFTA Economic Monitoring Taskforce, NAFTA-4, Sept. 1995, 72 pp.
NAFTA: Year Two and Beyond, NAFTA-5, Apr. 1996, 134 pp.
Analysis of the Effectiveness of the Dairy Promotion Program, USDA/AMS, Washington, DC, July 1995, 25 pp.
Rural Development Strategies, Nelson Hall Publishers, Chicago, IL, 1995, 304 pp.
The Agricultural Outlook for 1995, USDA/ERS, Washington, DC, Mar. 6, 1995, 78 pp.
The Agricultural Outlook for 1996, USDA, Washington, DC, Mar. 20, 1996, 80 pp.
Agricultural Chemical Usage: 1994 Field Crops Summary, AgCh 1(95), USDA/NASS/ERS, Washington, DC, Mar. 1995, 105 pp.

- Agricultural Chemical Usage: Vegetables 1994 Summary*, AgCh 1(95), USDA/NASS/ERS, Washington, DC, July 1995, 289 pp.
- The Forest Service in the Environmental Era*, FS-574, USDA/FS, Washington, DC, May 1995, 15 pp.
- How Does Living Alone Affect Dietary Quality?*, HERR-51, USDA/ARS, Washington, DC, Oct. 1994, 25 pp.
- Tracking Foodborne Pathogens from Farm to Table: Data Needs to Evaluate Control Options*, MP-1532, Dec. 1995, 188 pp.
- The EU Nitrate Directive and CAP Reform: Effects on Agricultural Production, Trade, and Residual Soil Nitrogen*, FAER-255, Jan. 1995, 27 pp.
- 1991 Net Economic Values for Bass and Trout Fishing, Deer Hunting, and Wildlife Watching*, No. 91-1, U.S. Department of the Interior, Washington, DC, 1994, 39 pp.
- Regulation and Innovation in the U.S. Pesticide Industry*, No. 95-12, Bureau of the Census, Washington, DC, 1995, 20 pp.
- The Economics of Food Assistance Programs*, USDA/ERS, Washington, DC, Jan. 1995, 39 pp.
- Long-Term Agricultural Baseline Projections, 1995-2005*, WAOB-95-1, USDA, Washington, DC, Feb. 1995, 88 pp.
- Agricultural Resources and Environmental Indicators*, AH-705, Dec. 1994, 205 pp.
- Processed Food Trade Concordance*, AH-707, Mar. 1995, 68 pp.
- Rural Government-Poor Counties, 1962-87*, RDRR-88, Feb. 1995, 27 pp.
- The Revised ERS County Typology: An Overview*, RDRR-89, Dec. 1994, 48 pp.

Congressionally Mandated Studies

- Annual Report on Trends in Family Farm Operations
- Annual Global Assessment of Food Production and Needs and Planned Programming of Food Assistance for the Coming Year
- Annual Report on Foreign Ownership of Agricultural Land
- Annual Estimates of Costs of Production for Wheat, Feedgrains, Cotton, and Dairy Commodities
- Monthly Table of Farm to Retail Price Spreads
- Annual Reports on Food Costs, Price Spreads, and Marketing Costs (2 per year)
- Annual and bi-monthly reports on Foreign Agricultural Trade of the United States
- United States and Canadian Cooperative Marketing of Grain for Export
- USDA Pollution Prevention Programs
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Reimbursements Received by the Economic Research Service

From	Study	Amount
FY 1995		
Agricultural Marketing Service	Dairy Board	\$ 321,544
Agricultural Research Service	Rural Community Studies	100,000
Corps of Engineers	Grain Study	55,078
Department of Energy	Industrial Uses	50,000
Foreign Agricultural Service	Slovakia - Emerging Democracies	81,888
Foreign Agricultural Service	Romania - Emerging Democracies	249,164
Foreign Agricultural Service	Russia - Emerging Democracies	181,156
Foreign Agricultural Service	Bulgaria - Emerging Democracies	169,116
Foreign Agricultural Service	Trade Conference	299,827
Foreign Agricultural Service	Bulgaria - Emerging Democracies	127,386
Foreign Agricultural Service	Agricultural Policy	62,375
Foreign Agricultural Service	Taiwan-Technical Assistance	50,000
Foreign Agricultural Service	Russia - Emerging Democracies	331,994
Foreign Agricultural Service	Trade Study	132,675
Foreign Agricultural Service	Ukraine - Emerging Democracies	52,239
Foreign Agricultural Service	Food Safety Risk	1,440
Foreign Agricultural Service	Africa-Technical Assistance	84,401
Foreign Agricultural Service	Primera Crop Production	13,493
Foreign Agricultural Service	Snapback Provision	11,000
Foreign Agricultural Service	Trade Consortium	12,375
Foreign Agricultural Service	Famine Prone Countries	60,243
Foreign Agricultural Service	Policy Analysis - China	18,005
Foreign Agricultural Service	Africa-Technical Assistance	127,069

From	Study	Amount
Food and Consumer Service	Nutrition Security	50,072
Forest Service	Research Exchange Visits to Ireland	5,000
Farm Service Agency	Federal Crop Insurance	1,508,078
Farm Service Agency	U.S. Cotton to Europe	3,989
Food Safety and Inspection Service	Policy Roundtable	1,000
Department of Interior	Environmental Valuation	90,000
Massachusetts Institute of Technology	Trade Study	6,968
North Carolina State University	Soil Management Collaborative Research Support Program	49,550
Rural Business Cooperative Service	Industrial Uses	25,000
Rural Housing Service	Rural Community Studies	400,000
Texas A&M University	Farm Costs and Returns Survey	27,618
Department of Commerce	World Trade Organization	1,983
Total FY 1995		\$4,761,726

FY 1996

Agricultural Marketing Service	Dairy Board	\$ 16,174
Farm Service Agency	Cotton Study	4,000
Foreign Agricultural Service	Africa -Technical Assistance	68,809
Foreign Agricultural Service	Russia - Emerging Democracies	409,647
Foreign Agricultural Service	Trade Conference	84,391
Foreign Agricultural Service	Africa -Technical Assistance	108,790
Foreign Agricultural Service	Technical Assistance	134,008
Foreign Agricultural Service	Famine Prone Countries	49,605

From	Study	Amount
Foreign Agricultural Service	Poland - Emerging Democracies	172,200
Foreign Agricultural Service	Taiwan - Technical Assistance	100,000
Foreign Agricultural Service	Ukraine - Emerging Democracies	939,635
Foreign Agricultural Service	Snapback Provision	11,000
Foreign Agricultural Service	Agricultural Policy Seminar	12,500
Foreign Agricultural Service	Bulgaria - Emerging Democracies	326,032
Foreign Agricultural Service	Slovakia - Emerging Democracies	118,480
Foreign Agricultural Service	Romania - Emerging Democracies	1,280,672
Foreign Agricultural Service	Russia - Emerging Democracies	228,642
Food and Consumer Service	Food Stamp Program	24,079
Forest Service	Macroeconomic Variables	2,000
Grain Inspection, Packers, and Stockyards Administration	Economic Assessment	21,002
Rural Business Cooperative Service	New Uses of Agricultural Products	25,000
Texas A&M University	Farm Costs and Returns	27,400
United Nations	Nicaragua Cost of Production	29,568
University of Missouri	Farm Environmental Policy	36,000
Total FY 1996		\$4,229,634

USER FEES

Question. Under non-federal funds received by ERS, the budget indicates user fee collections of \$426,699 for fiscal year 1995, and \$400,000 for each of fiscal years 1996 and 1997. What user fees are collected by the agency? Who determines the level of the fees charged and who pays these fees?

Answer. ERS uses a private contractor to manage all aspects of its publication and data product distribution program and collects user fees from the recipients of those products directly related to the costs of reproducing and distributing these products. The fees are used to offset the cost of the contract, which

provides a high level of customer service at no net cost to the Government. The collection of user fees for this purpose is authorized in Section 1121 of the Agriculture and Food Act of 1981, as amended, 7 U.S.C. 2242a, and the fees charged, which are set by ERS, are consistent with the guidelines in OMB Circular A-130 concerning user fees for information dissemination.

QUESTION SUBMITTED BY SENATOR BOND

USDA BIOFUELS RESEARCH

Question. (Biofuels) The Committee is interested in value added for agriculture commodities, in particular biofuels. What emphasis is the Department putting on biofuels research?

Answer. The Department of Agriculture (USDA) has a strong biofuels research program with a funding level estimated at \$10.3 million for FY 1996 and budgeted for \$10.9 million in FY 1997. Agencies participating in the program include the Agricultural Research Service (ARS), Forest Service (FS), Alternative Agricultural Research and Commercialization Corporation (AARC), Cooperative State Research Education and Extension Service (CSREES), Economic Research Service (ERS), and Office of Operations (OO). Program activities are coordinated by the Office of Energy and New Uses in ERS at the staff level.

... Does this emphasis include economic research?

Economic research is an important component of the program. For example, ERS studies have evaluated the implications of expanded biofuel use on farm income and rural employment. Biofuel technology was economically evaluated in an ERS study to help target the greatest opportunities for cost reduction from research. A life-cycle cost study of alternative fuels was conducted by the University of Georgia and cofunded by ERS and the National Biodiesel Board. This study concluded that biodiesel can economically compete with compressed natural gas and methanol as fuels for urban transit buses. ERS analysts continue to evaluate the short-run and long-run marketing opportunities for biofuels in light of the changing economic and policy environment.

... What partnerships has the Department been able to institute with private enterprises to further biofuels research and the acceptance of biofuels by the public?

The Department has instituted a number of partnerships with private enterprise. Typically, these relationships take hold as a new technology nears commercialization. The Forest Service is working on ethanol cellulosic conversion technology with American Ethanol, Inc. and the National Corn Growers Association. ARS has a cooperative research and development agreement and material transfer agreements with Rohm and Haas Company and confidentiality agreements with ADM and Phyton Catalytics on ethanol coproduct research. AARC funds were used to help Midwest Biofuels, Inc. commercialize and market biodiesel and to assist the National Biodiesel Board in setting biodiesel emissions standards. AARC has also cost-shared with private enterprise on a number of other biodiesel and ethanol

projects. In addition, USDA researchers regularly share results and receive feedback from biofuel industry and agricultural groups on both an informal and formal basis.

... What partnerships has the Department forged with other government departments and agencies?

Several partnerships have been forged with other Government Departments and Agencies. CSREES has worked with the Department of Defense to evaluate the storage, material compatibility and environmental properties of biodiesel; OO and the Department of Interior are working together to find opportunities to use biodiesel in environmentally sensitive areas; ERS and the Department of Energy (DOE) are collaborating on a total fuel-cycle analysis chronicling biodiesel's cradle to grave environmental properties compared to petrodiesel; and DOE and FS are collaborating on energy crop feedstock research. ARS has a Memorandum of Understanding with the Washington State Wheat Commission on ethanol research using wheat as the feedstock. ARS is also cooperating with the Illinois Department of Energy and Natural resources on an ethanol pilot plant feasibility study. USDA and DOE are cooperating with the Environmental Protection Agency (EPA) on an analysis of the effects of using oxygenates in gasoline on toxic emissions. USDA, DOE, and EPA have also participated in an analysis of the Oxygenated Fuels Program with the White House Office of Science and Technology Policy. Finally, DOE and USDA cosponsored a biomass power for rural development request for proposal to demonstrate and commercialize new biomass for power technology. The Rural Utilities Service, Farm Service Agency, and Natural Resource and Conservation Service offered in the request for proposal to use existing programs and authorities to help facilitate this project. Awards are expected this June.

... Will the Memorandum of Understanding on biofuels with the Department of Energy be renewed?

The Memorandum of Understanding on biofuels with DOE was signed in January 1991 by Agriculture Secretary Yeutter and Energy Secretary Watkins and is set to expire January 1997. A decision on continuation has not been made.

... Is the research being done multi-disciplinary in nature?

USDA biofuels research is proceeding in a multidisciplinary framework. Engineers and scientists, both physical and biological, work together on biofuels projects. Social and physical scientists together assess the best opportunities for cost-reducing technologies. In addition, environmental and energy policy and regulations provide direction for biofuel research. Therefore, a legal, economic, and scientific assessment of biofuels market opportunities requires social and technical researchers. For example, ERS researchers have worked with engineers and other USDA scientists to evaluate the life-cycle relative energy and emissions benefits of ethanol and gasoline.

QUESTION SUBMITTED BY SENATOR BUMPERS

EFFECT OF GRAIN PRICES ON THE FARM SITUATION

Question. The current situation with grain stocks and prices is making headlines and causing great concern for certain parts of the economy. Stories in the press are not necessarily consistent. Some commentators say the problem is very serious and others indicate any disruptions will soon work themselves out.

To farmers, ranchers, rural communities and consumers, the effects of this situation are serious. Livestock producers are having problems meeting the costs for feed (at time when prices for them are at a terrible low), rural communities see either boom or bust depending on the nature of the area's farming activities, and consumers fear what may happen to the price of food.

... Has ERS been able to project any short term or long term effects of the current situation?

Answer. ERS is continuously monitoring the situation and participates with other USDA agencies in developing the USDA forecasts issued through the World Agricultural Outlook Board. With prices especially for wheat, feed grains and soybeans up sharply from a year ago and the highest in many years, a reduction in 1995/96 U.S. feed use is expected, particularly in the cattle and hog complex. Pressure on U.S. grain stocks and prices did not ease this spring as global supplies tightened; the condition of the U.S. winter wheat crop deteriorated, and strong exports continued despite rising prices.

Even with a projected 27 percent increase in feed grain production, total U.S. grain supplies are projected to increase only 4 percent from 1995/96, because of a 4 percent drop in wheat production (due to a combination of drought and winterkill) and extremely low carry-in stocks for both wheat and feed grains. Global grain supplies are also only projected to expand 4 percent in 1996/97. While U.S. soybean supplies are expected to be nearly 11 percent lower, global supplies are expected to rise.

Even though high prices are encouraging expanded U.S. feed grain plantings and foreign wheat production, grain prices are likely to remain strong and volatile over the summer, then ease in the fall when the U.S. corn crop and foreign wheat crops are harvested and begin entering global marketing channels.

Large competitor wheat crops are likely to moderate prices later in the year but corn prices will be almost totally dependent on developments in the U.S., which dominates global production. Weather during the summer 1996 growing season will be pivotal. If 1996/97 corn yields are above average, a return to a normal supply and demand situation could occur within a year. Soybean prices will also depend on developments in the United States and the Southern Hemisphere response. Looking ahead to the 1996/97 crop year, we now expect U.S. season average farm prices to be \$ 4.70 - \$5.30 for wheat, \$ 2.70-\$ 3.10 for corn, and \$ 5.75-\$ 8.00 for soybeans.

For the longer term, increased flexibility under the recently enacted Federal Agriculture Improvement and Reform Act (FAIR) and the absence of acreage reduction programs-ARPs and the supply management programs used in the past should allow faster adjustments in United States to changing market conditions.

The shortrun impacts of the current grain situation on the livestock sector are dictated by biological lags inherent in the system. The cattle that are going to be

slaughtered this year and most of next year are already in the cattle inventory. Hogs for slaughter through the third quarter of 1996 have also been born and breeding for fourth quarter and early 1997 hog production is completed. There is not likely going to be much change in red meat production in 1996 as a result of current situation in grain prices. In the second half of the year, we see cattle prices averaging in the low-to-mid \$60 per cwt, hog prices will average in the near \$50 and poultry prices in the mid 50 cents per pound.

Production is expected to continue expanding in 1997, although higher grain prices are slowing the rate of expansion. Pork production should increase 2.5-3 percent for the year, beef production about 2 percent and poultry production 4.5-5 percent. In 1997, pork and broiler prices are expected to slip to \$46-50 per cwt and \$0.52-0.56 per lb, respectively, while beef prices may strengthen slightly at \$62-68 per cwt.

If there is a further and sustained increase in grain prices, there will be some increase in production in the short run as higher feed prices force producers to liquidate breeding herds. The impact would be most pronounced in 1997 and beyond; reduced breeding herds would result in lower production and higher prices in later years.

So far in 1996, there have been no major price increases for most of the cereals and bakery food items as grain prices affect the processed food categories less than the general price inflation in labor and energy. With the CPI for all items forecast to increase about 2.8 percent in 1996, price increases for the processed food categories are expected to be moderate. The current forecast for 1996 for all food is a 2.4 percent increase, with food at home (62.7 percent of all food) forecast to increase 2.2 percent and food away from home (37.3 percent of all food) expected to increase 2.1 percent. The CPI for all food is expected to increase 2.2 percent in 1997 with food at home increasing 2.2 percent and food away from home up 2.1 percent.

Presently, the USDA projections for the retail price index for meat, poultry, and fish is expected to increase about one and a half percent for 1996 over 1995. Beef retail prices in 1996 are expected to decrease about 1.1 percent from 1995, while pork prices are expected to be up 3.7 percent. Poultry retail prices are expected to increase about 3.8 percent from 1995. The retail price index for dairy products is expected to increase about 3.4 percent for 1996.

... Can you provide any suggestions on how we can avoid the historical boom and bust cycles of the past?

The Federal Agricultural Improvement and Reform Act (FAIR) Act, signed into law on April 4, 1996, grants nearly 100 percent planting flexibility to participating farmers and removes Federal supply control mechanisms such as the acreage reduction program. Under provisions of the FAIR Act, commodity loan rates are based on market clearing prices. As a result, government stock accumulation, and annual acreage idling programs will no longer be an influence on markets. The Department is currently undertaking a comprehensive review of the expected impacts of the new legislation on market volatility which we hope will give insights into the cyclical forces that will be confronted in the future.

NATIONAL AGRICULTURAL STATISTICS SERVICE
QUESTIONS SUBMITTED BY SENATOR COCHRAN

CENSUS OF AGRICULTURE

Question. The fiscal year 1997 request includes an increase of \$17.5 million and 114 staff years to fund the 1997 Census of Agriculture. The budget notes indicate that funding and responsibility for the 1997 Census of Agriculture is proposed to be transferred from the Department of Commerce, Bureau of Census, to the Department of Agriculture, National Agricultural Statistics Service (NASS). I note that you are proposing in connection with the transfer of the Census of Agriculture from Commerce to USDA appropriations language to include the Census "notwithstanding provisions of 13 U.S.C. 142 (a-b)." Wouldn't it be more proper to seek separate legislative authorization for this transfer? Has that been done? What does 13 U.S.C. 142 (a-b), which you are asking to be disregarded, state?

Answer. Yes, we agree, and a legislative proposal to transfer the authority to conduct the Census of Agriculture from the Secretary of Commerce to the Secretary of Agriculture is being reviewed within the Administration. Once passed, this legislation would override the "notwithstanding provisions of 13 U.S.C. 142 (a-b)" statement in the appropriations language. Title 13 U.S.C. 142 (a-b) states that the Secretary of Commerce shall take a Census of Agriculture every fifth year and, every tenth year, the Secretary shall take a census of irrigation.

Question. The budget justification indicates, and the witnesses appearing before the Committee confirmed, that the funding for the Census of Agriculture is proposed to be transferred from the Bureau of the Census, Department of Commerce, to USDA's National Agricultural Statistics Service. Why is the funding for this Census reflected as a proposed increase in the USDA budget? How does the President's FY 1997 budget propose that these funds be transferred from the Department of Commerce to the United States Department of Agriculture?

Answer. The FY 1997 budget proposes that the Census of Agriculture be transferred from Commerce's Bureau of the Census to USDA's National Agricultural Statistics Service. In terms of the funding, the President's budget already reflects the transfer of funding from the Department of Commerce to the Department of Agriculture. The term "transfer" of the funding now refers to the two separate appropriations subcommittees which need to deal

with the fact that historically the Census of Agriculture was funded as part of the Department of Commerce and now is proposed to be funded as part of the Department of Agriculture.

FARM DEFINITION

Question. I also understand that there have been proposals to "raise the farm definition." What is the current farm definition and does NASS propose that it be changed?

Answer. Currently a farm is defined as a place with annual farm sales of \$1,000 or more. NASS does not propose a change.

CENSUS OF AGRICULTURE

Question. I am aware the funding requirements for Census activities fluctuate from year to year. I understand that the funding requirements for the Census of Agriculture will fluctuate over each year of the five-year cycle. If funding requirements for this Census are estimated to be \$10 million for fiscal year 1996 and \$17.5 million for fiscal year 1997, as the budget justification indicates, what funding would be required for FY 1998? What would be required for each of the succeeding two fiscal years?

Answer. Current estimates indicate funding requirements of \$36.0 million in FY 1998, \$25.0 million in FY 1999, and \$17.4 million in FY 2000.

Question. If the Census of Agriculture is transferred as requested, will the National Agricultural Statistics Service be able to gear up fast enough or will the Bureau of the Census continue to perform these activities on a reimbursable basis?

Answer. The Bureau of the Census and NASS are working closely together to facilitate a smooth transition of responsibilities, assure historical continuity, and make maximum use of the expertise and resources of both agencies. For the FY 1997 Census, it is anticipated that NASS would carry out some of the activities and others would be performed on a reimbursable basis by the Bureau of the Census. For example, NASS's 45 field offices which serve all 50 States possess a wealth of local knowledge that would be invaluable in assisting with the census operations and expediting the review and tabulation of the data collected. NASS would reimburse the Bureau of the Census

for any activities it performs.

Question. You indicate the benefits of merging the Census of Agriculture with the agricultural survey program administered by the National Agricultural Statistics Service. I take it that the Service is the principal user of the Census data now. The budget indicates that the consolidation will also eliminate the duplication of "list building activities." What do you mean by this?

Answer. NASS is not the major user of the Census of Agriculture data, since the census data do not become available in time to affect the current agricultural statistics program administered by NASS. The benefit of Census data to NASS is that it strengthens the total agricultural statistics program available to the user community by supplying local area statistics that are not a part of the NASS program.

Currently, both the Bureau of the Census and NASS develop and maintain separate lists of farm operators in the United States for the Census and for NASS survey purposes. As the agricultural statistics programs of the two organizations are integrated, there will no longer be a need for two separate name and address lists.

Question. The budget indicates that the transfer of the Census would most importantly reduce reporting burdens on agricultural producers, who now are asked to report data to both agencies. What reports are now requested of agricultural producers? Which would be eliminated?

Answer. NASS conducts ongoing agricultural surveys of farmers, ranchers, and agribusinesses, and once every 5 years the Bureau of the Census conducts the Census of Agriculture, which asks for similar information. Integration of the statistics programs of the two organizations will ultimately result in fewer contacts of farmers for information as an integrated survey program is designed to make maximum use of all information collected for purposes of the Census of Agriculture as well as NASS's statistical reports. After the 1997 Census, the entire survey program will be reviewed for changes to ensure a streamlined and integrated operation which will eliminate duplicate reporting of the same information.

POSTHARVEST PESTICIDE DATA COLLECTION

Question. An increase of \$600,000 is requested to enable the National Agricultural Statistics Service to

initiate the collection of postharvest pesticide data to inform EPA, the FDA, and the Agricultural Marketing Service on the extent of pesticides applied to foods just prior to actual consumption (after they leave the farm). The budget indicates that in the first year of this initiative, the Service will collect postharvest data in 12 States on apples and potatoes, and will then rotate to postharvest surveys of other crops in other States, to be determined each year in consultation with EPA, FDA, and AMS. Which 12 States have been selected? On what basis will other crops and States be selected?

Answer. The 12 States targeted in the first year of data collection are California, Colorado, Idaho, Maine, Michigan, Minnesota, New York, North Dakota, Oregon, Pennsylvania, Washington, and Wisconsin. These 12 States are all major producers of apples and/or potatoes. The criteria used to select States and commodities focuses on food safety and pesticide regulatory issues. Selecting commodities that are consumed in large quantities by children and adults is important. Ensuring that we support the AMS residue testing program also is an important basis for selection. Providing the EPA with high quality data on which to base regulatory decisions is a third basis for selecting States and commodities. NASS purposely has remained flexible on the States and commodities that we choose in order to best serve the needs of data users.

Question. How will the data collected be used? What linkage will there be with the residue data collected by the Agricultural Marketing Service (AMS)?

Answer. There are many users, both private and government, who for various reasons must rely on scientific pesticide use data. However, users of the data having the greatest impact on the public are government agencies that make policy and regulatory decisions and predictions based on NASS pesticide use data. A sampling of the different uses by agency follows:

EPA needs reliable data on percent of crop acres treated to calculate accurate estimates of dietary exposure to the general public. NASS chemical usage data are used to estimate benefits and to predict the relationship between chemical use and risk to consumers.

FDA needs usage data to determine what specific pesticides it needs to test for in its chemical residue food testing program since it would be impossible to test for all available chemicals. FDA uses the data to respond to foreign countries with domestic chemical use

data since the Pesticide Monitoring Improvement Act of 1988 requires other countries that export food to the United States to provide similar pesticide use data.

Usage data are linked to ERS's economic data in order to measure the economic effect of decisions on chemical use.

The NASS usage data directly support the residue testing which AMS performs under the Pesticide Data Program. There is a direct link between the individual commodity chemical usage data collected by NASS and the active ingredients included in the AMS residue testing program. Laboratory tests for specific pesticide residues have to be determined months in advance. Therefore, the NASS survey results regarding what pesticides are being used in the fields are the main source of accurate data that AMS uses as a basis for its decisions.

PESTICIDE USE DATA

Question. The fiscal year 1997 budget requests an increase of \$1 million and 4 staff years to expand the pesticide use data program to include additional crops and States, as requested by the EPA and other agencies. The Service proposes to expand its coverage to 10 additional States and 10 additional crops. Which States and crops are now covered and which 10 States and 10 crops will be added?

Answer. The NASS Pesticide Data Program surveys currently provide data on apples, apricots, avocados, blackberries, blueberries, sweet and tart cherries, dates, figs, grapefruit, grapes, kiwi fruit, lemons, limes, nectarines, olives, oranges, peaches, pears, plums, prunes, raspberries, tangelos, tangerines, temples, asparagus, broccoli, cabbage, cantaloupes, carrots, cauliflower, celery, cucumbers, eggplant, green peas, honeydews, head, romaine, and other lettuce, lima beans, dry onions, bell peppers, snap beans, spinach, strawberries, sweet corn, tomatoes, watermelons. Fruit crops are surveyed in odd years; vegetables are covered in even years. The States in the current program include Arizona, California, Florida, Georgia, Michigan, Minnesota, New Jersey, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Texas, Washington, and Wisconsin.

The requested funding increase actually would allow NASS to publish much more than the 10 crops and States mentioned for FY 1997. Over a 2-year period, NASS would be publishing data on 22 new crops in 23 new States. The

new funding increase would allow NASS to publish new pesticide data on collards, kale, mustard greens, peanuts, pumpkins, radishes, squash, sugarcane, sweet potatoes, turnip greens, almonds, limes, pecans, walnuts, barley, alfalfa, other hay, oats, popcorn, rice, sorghum, and sugar beets. The additional States included are Alabama, Arkansas, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Montana, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Virginia, and Wyoming.

Question. The budget indicates that the expansion of this program has been requested by the EPA and other agencies. What specific requests have these agencies made?

Answer. NASS staff members are on key committees that deal with food safety and water quality issues. At these meetings, several agencies, as well as private and State organizations, have formally requested increased pesticide usage data. AMS, FDA, and EPA have requested usage data on foods consumed by children. EPA and USDA agencies have requested data on minor commodities. EPA also has requested usage data on major commodities to help with pesticide benefit and risk assessments. There are many other organizations who have consistently asked NASS to provide more data on pesticide usage. These include the National Potato Council, American Farm Bureau Federation, and the Florida Fresh Fruit and Vegetable Growers Association, to name a few.

Question. You indicate that pesticide use data on many of the "minor" or specialty crops does not exist at this time and that registration or re-registration for "minor" crop pesticides may directly impact the ability of producers of these commodities to stay in business. Would you please explain this more fully and tell us how the expansion of this data collection program will prevent this?

Answer. There are very few pesticide products available for use on specialty crops. When these pesticides are submitted for re-registration approval by EPA, quality pesticide usage data help EPA determine if the use justifies continuing registration. These decisions directly affect the economic well-being of specialty crop farmers since the availability of effective pesticides is essential to their producing a quality crop that is marketable and profitable. By NASS providing EPA with high quality usage data on specialty crops, EPA can make decisions based on facts.

INTEGRATED PEST MANAGEMENT DATA

Question. An increase of \$1.5 million and 7 staff years, \$1.5 million above the fiscal year 1996 level, is proposed to enable the National Agricultural Statistics Service to conduct an annual survey of farmers to determine the Integrated Pest Management (IPM) practices used by farmers, pesticides used, application rates, and the financial costs and returns. The Department maintains that these data are needed to determine the extent on IPM use and the economic and environmental benefits derived from IPM practices. The budget notes indicate that the annual survey you are proposing to fund will be a "whole-farm" survey to collect nationwide data on Integrated Pest Management (IPM) participation. You indicate that this will differ from crop-specific surveys; that this whole-farm survey will be designed to complement these other surveys. Why can't it be designed to encompass these other surveys?

Answer. These data will provide the first comprehensive measure of total agricultural pesticide use at the national level which will result in significant new chemical use information and be an important addition to the existing chemical use data base. The whole-farm survey data will also meet the requirements of Section 1491 of the Food, Agriculture, Conservation, and Trade Act of 1990, which continue to be in effect. Those requirements include basic usage statistics on restricted use pesticide products which are currently not being collected. The whole-farm survey collects data on all pesticide products, both restricted and non-restricted, used on the entire farm.

The second purpose of the survey is to collect information on the IPM practices used by farmers. This information is essential for measuring progress on adoption of IPM practices, and it also will allow USDA to calculate economic and environmental benefits from various IPM practices.

A separate survey needs to be conducted to collect these types of information because the purpose of the survey is entirely different from the current pesticide use survey and requires a much different survey design. The type of operations which need to be included in the sample design are crop farms, livestock operations, and specialty farms like mushroom and nursery operations. This differs from the current survey which collects very detailed field level information for major crops on chemical usage, production practices, input use, and

costs and returns. In addition, fruit and vegetable crops surveyed in selected States must be designed specifically to deal with these specialty crops. If NASS combined these two surveys, the result would be a less efficient sample design, lengthier questionnaire, and costlier data collection per operation. Both surveys require the collection of detailed information, so NASS will control the sample overlap between the two surveys to ensure that no farmer is interviewed for both surveys.

Question. What is the cost of the crop-specific surveys? How many are done? On which crops?

Answer. NASS receives congressional appropriations of \$3.5 million to complete crop-specific surveys on fruits and vegetables. This appropriation is part of USDA's Pesticide Data Program. NASS also receives reimbursable funds from the Economic Research Service of approximately \$1.5 million to complete crop-specific surveys on field crops. NASS has two major survey programs each year. Both of them have three phases; the first to identify crop-specific producers, the second phase to collect detailed pesticide use and farm practices data, and the third to focus on financial costs and returns.

The field crops covered in these two survey programs are corn, cotton, soybeans, winter wheat, spring wheat, durum wheat, and flue-cured tobacco. The fruit or berry crops included are apples, apricots, avocados, blackberries, blueberries, sweet and tart cherries, dates, figs, grapefruit, grapes, kiwi fruit, lemons, limes, nectarines, olives, oranges, peaches, pears, plums, prunes, raspberries, tangelos, tangerines, temples. The vegetable or melon crops covered are asparagus, broccoli, cabbage, cantaloupes, carrots, cauliflower, celery, cucumbers, eggplant, green peas, honeydews, head, romaine, and other lettuce, lima beans, dry onions, bell peppers, snap beans, spinach, strawberries, sweet corn, tomatoes, watermelons.

Question. If funded, when would the Service begin this nationwide "whole-farm" survey? How long would it take? What will be its total cost? When would you expect to have usable data from the survey?

Answer. If funded for fiscal year 1997, NASS would begin data collection in February 1997 for the 1996 crop/calendar year. NASS would collect all data within 6-8 weeks. Following data collection another 6-8 weeks of editing and analysis would be required. A final publication would be available in August 1997, approximately 6 months after the start of data

collection. The total cost of the survey is \$1.5 million per year.

Question. How is NASS using the \$100,000 available for this initiative for fiscal year 1996?

Answer. NASS used part of the \$100,000 to publish an annual Agricultural Chemical Use, Restricted Use Pesticide Summary in December 1995. The data for this report were extracted from the NASS field crop and vegetable chemical use surveys conducted in 1994. Since the chemical use data in the regularly published reports represented both restricted and general use chemicals, the data were resummarized so that restricted use data could be published separately. This funding is also being used to test improved methodology for collecting whole farm pesticide use data.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

CENSUS OF AGRICULTURE

Question. In your proposed budget you have requested for \$17.5 million to fund the Census of Agriculture. It is my understanding that legislation must be passed that would transfer the Census of Agriculture from the Department of Commerce to USDA. Is this true?

Answer. Yes. Authorizing legislation is being prepared that would transfer the authority to conduct the Census of Agriculture from the Secretary of Commerce to the Secretary of Agriculture.

Question. Has the Administration proposed legislation to provide for this transfer?

Answer. No. The Administration will be reviewing a legislative proposal and will provide this proposal to the Congress once an internal review by affected agencies is completed.

Question. I am interested in USDA taking over this function and believe the collection of data for the upcoming AG Census is very important. Could you explain what would be entailed in the transfer from the Department of Commerce?

Answer. The authorizing legislation would transfer the authority for conducting the Census of Agriculture to the Department of Agriculture and the budget request for USDA includes the funding. The Bureau of the Census and NASS are working closely together to assure a smooth transition. All functions are under review to determine how to integrate and streamline operations and eliminate

inefficiencies in a manner which will best utilize the resources and expertise of both NASS and the Bureau of the Census.

Question. What changes do you see in how and what data would be collected and how it would be used and disseminated?

Answer. NASS intends to continue the Census of Horticultural Specialties, Farm and Ranch Irrigation Survey, and the Agriculture Economics and Land Ownership Survey which the Bureau of the Census had planned to discontinue. In addition, NASS is not changing the farm definition, which the Bureau of the Census had planned to do. NASS will also streamline the processing of the 1997 Census of Agriculture through the use of its 45 field offices which serve all 50 States. NASS is planning to process all States simultaneously. This will make the results of the census more timely when they are released to the public. NASS also intends to continue the Census of Agriculture for the United States territories of the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico. The results of the 1997 Census of Agriculture will be available on the Internet as well as CD-ROM. However, printed copies will continue to be available as in prior years.

FARM DEFINITION

Question. Are you looking at changing the definition of a farm? If so, what changes would you recommend? How would this impact agricultural communities? How might this impact the way Census data are used by all levels of government? Private sector? Research community?

Answer. No. At the present time, USDA is not proposing any change to the farm definition. Currently, a farm is defined as a place with annual farm sales of \$1,000 or more. This definition has been in use since the 1974 Census of Agriculture.

PRECISION AGRICULTURE

Question. What role if any do you see for the Department as it relates to site-specific farming and precision agriculture? Do you see a need for additional research in this area? Do you see a role for USDA in looking at how such technology could be utilized by farmers regardless of how large or small they may be?

Does USDA see this as moving agriculture into the new information age? If so, how do we explain and orientate producers on the benefits of such information?

Answer. The Department has a role in developmental research, assessing economic impact, and transferring knowledge to producers in order to maximize benefit while minimizing societal cost from precision farming as well as for other technological changes in agriculture. The Department is well positioned to assist producers through its cooperative extension and education programs which will provide objective guidance on the advantages and disadvantages associated with precision agriculture. NASS will make changes to its data collection program as additional data are needed on precision farming.

QUESTION SUBMITTED BY SENATOR BUMPERS

CENSUS OF AGRICULTURE

Question. The responsibilities for conducting the U.S. Census of Agriculture are being transferred to your agency. Recently, there has been concern that the Census Bureau was going to redefine a farming operation in a manner that would greatly reduce the overall number of farms in this country. Do you intend to modify the definition of a farming operation and if so, in what way?

Answer. No. The current budget request for the Census of Agriculture is sufficient to maintain the definition of a farm at its level of annual farm sales of \$1,000 or more. This is the same definition that has been used since 1974.

SUBCOMMITTEE RECESS

Senator COCHRAN. Our next hearing is going to be held on May 2, Thursday morning, at 10 a.m. It will be held in this room in the Dirksen Senate Office Building, room 138. At that time, we will hear from witnesses who will discuss the budget request for the Commodities Futures Trading Commission and the Food and Drug Administration, which come under the jurisdiction of this subcommittee.

Until then, the subcommittee will stand in recess.

[Whereupon, at 11:40 a.m., Tuesday, April 30, the subcommittee was recessed, to reconvene at 9:39 a.m., Thursday, May 2.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

THURSDAY, MAY 2, 1996

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:39 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Bond, McConnell, Burns, and Bumpers.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

FOOD AND DRUG ADMINISTRATION

STATEMENT OF DAVID A. KESSLER, M.D., COMMISSIONER

ACCOMPANIED BY:

MICHAEL A. FRIEDMAN, M.D., DEPUTY COMMISSIONER, OPERATIONS

WILLIAM B. SCHULTZ, DEPUTY COMMISSIONER, POLICY

MARY K. PENDERGAST, DEPUTY COMMISSIONER/SENIOR ADVISER TO THE COMMISSION

ROBERT J. BYRD, ACTING DEPUTY COMMISSIONER, MANAGEMENT AND SYSTEMS

DENNIS P. WILLIAMS, DEPUTY ASSISTANT SECRETARY, BUDGET, DEPARTMENT OF HEALTH AND HUMAN SERVICES

OPENING REMARKS

Senator BOND. On behalf of Senator Cochran and Senator Bumpers—oh, I turn it over to Senator Cochran. [Laughter.]
Fantastic.

Senator COCHRAN. We appreciate very much our witnesses being here this morning to help us proceed with our hearing on the President's budget request for agriculture, rural development, and related agencies. We have this morning the Food and Drug Administration and the Commodities Futures Trading Commission appearing before the subcommittee. We appreciate Dr. Kessler, the Commissioner of the Food and Drug Administration, being here, along with John Tull, who is the Acting Chairman of the Commodity Futures Trading Commission.

We will hear from Dr. Kessler first. We have your testimony. We thank you for the statement. It will be made a part of the record in full. We would encourage you to make any summary comments or other remarks that you deem appropriate.

Welcome. You may proceed.

STATEMENT OF DAVID A. KESSLER

Dr. KESSLER. Thank you very much, Mr. Chairman, and thank you for the personal courtesy you have shown because of a personal event that I may need to go to later. I appreciate the members' courtesy very much and the chairman's courtesy.

Mr. Chairman, members of the committee, this is always a very important hearing. It is important not because it is a budget hearing, not because we talk about dollars alone, it is important because you rightfully ask the important hard questions about how we at the Food and Drug Administration are protecting and promoting Americans' health, and this year, as in past years, I am proud to tell you about the performance of the Agency in protecting and promoting the public health.

As the members of this committee know, the jurisdiction of the agency is vast and very considerable. For instance, in 1992 Congress gave us the responsibility to upgrade mammography facilities and to provide American women better protection from breast cancer, which strikes 185,000 victims a year. Last year alone, our Center for Medical Devices and Radiological Health certified 10,200 mammography facilities nationwide, and we did it on time. The General Accounting Office found that the program's implementation is a solid success.

The new food label, in just 2 years, has helped millions of Americans make their own choices of the foods that best meet their health needs, and we are proposing to do the same for prescription medicines, giving patients easy-to-read and easy-to-understand information about the drugs that they take. The studies have shown that the lack of such information contributes significantly to widespread medication misuse. The cost of the misuse of the Nation's health care bill is staggering, an estimated \$20 billion annually.

In the past year—and currently—there has been a lot of talk about FDA reform. While that debate takes place, the agency has been hard at work. As part of the National Performance Review, the Vice President's effort, the agency has implemented a number of initiatives to reinvent the way we regulate drugs and medical devices. We have maintained the same high measures of safety and efficacy upon which Americans have continued to rely over the century, while reducing unnecessary regulatory burdens. Hundreds of millions of dollars will be saved by industry and important products will get to patients sooner because of those reinvention initiatives.

The most recent of these initiatives was announced a little more than 1 month ago by the President. We will accelerate the approval and expand access to promising cancer therapies. We are building on our success with AIDS therapies, but understand we are also taking a risk. It is a risk worth taking for these patients.

Reinventing FDA to better protect and promote the public health is not simply this year's fashion with us. It is what we do day in and day out, and I can give you no better example than the successful completion of our 4-year effort to revolutionize the way we review the safety of our food supply, especially our seafood. In December, we put into place the hazard analysis critical control

points. It is a fancy name for what is called the HACCP system, but what its basic tenet is is to identify problems and prevent problems before they actually happen. It designs quality control into the production of the food processing industry.

When I came before this committee last year I told you how the agency acted swiftly to stop a scheme with regard to, of all things, counterfeit baby formula. Our job is to be vigilant every day for any product that can harm the American consumer, whether it is a drug appropriately approved but found later to have certain harmful effects, or a product that is hazardous on its face. We have been up to that task again this year. Working with the U.S. Customs Service and the U.S. Department of Agriculture, we have halted the smuggling of clenbuterol into the United States. This is an unapproved drug that is used in some countries to increase the muscle mass in animals such as veal, but has caused serious outbreaks of food poisoning in humans in France and Spain.

To put FDA's 1995 performance more fully in perspective, let me tell you about three reports that speak to the agency's mission of providing American patients with safe and effective drugs. Two of these reports have been submitted to the Congress, and the third one was our attempt to see how well we were doing, how well we serve American patients, by making important new drugs available to them in a timely fashion. Congress gave us—you gave us help in 1992, when you passed the Prescription Drug User Fee Act.

In return for those resources, made possible by user fees, paid for by the industry, the agency committed to aggressive performance goals over a 5-year period, with the hurdle being raised each year until full implementation in 1997. We met and surpassed a major 1997 performance goal in fiscal year 1994, a full 3 years ahead of schedule. For the drugs submitted in fiscal 1994, the last year for which we have complete data, we reviewed and acted upon 96 percent of them on time. Let me say that again: We beat the 1997 goal 3 years ahead of schedule.

In fact, we continue to meet or exceed each of the performance goals established as a result of the User Fee Act that you enacted. That is, I believe, a model for reinventing Government. Congress, the agency, the industry, working together, providing necessary resources, setting performance goals, and holding this agency accountable, and doing it in a way that does not lower safety and efficacy standards one iota.

The second report was issued by the General Accounting Office in October. We found that the agency had actually begun improving its performance—the GAO report found that the agency had actually begun improving performance on drug reviews and approvals in the late 1980's and early 1990's. Let me give you the bottom line of those findings.

Between 1987 and 1992 drug review and approval times were reduced by more than 40 percent, from 33 months, a very long time, to 19 months in 1992. The User Fee Act, then, enacted in 1992, has allowed us to build on that solid base of success, and we are markedly reducing the time it takes to review and approve new drugs.

The GAO also looked at how the United States compares with the United Kingdom, a country that many of our critics like to cite as having a drug review system that is faster. GAO found that in

1994 FDA drug review and approval times were faster than the United Kingdom. Another independent analysis confirms what the GAO found. FDA's median approval time for new drugs approved in 1994 and 1995 was as fast as the United Kingdom, and faster than those in France, Spain, Germany, Australia, Japan, Italy, and Canada, and those are not our numbers. That analysis was done by the Center for Medicines and Research, an industry-funded not-for-profit research group in the United Kingdom.

Let me digress from drugs for a moment to take notice of another GAO report issued in March. The GAO was asked to compare the U.S. system of device regulation to that of the European Union. That report makes several points. First, the U.S. system enacted by Congress requires that devices actually demonstrate clinical benefit, that they are of use to patients. The European system does not. Second, the conflict of interest rules for FDA reviewers are more comprehensive. Third, the European Union system is so new that a meaningful comparison of review times with the FDA is not possible, but FDA is reducing review times for 510(k)'s which account for almost 98 percent of the devices we review.

Let me return to my main point: The FDA record in reviewing new drugs. Before I turn to the third report I mentioned, let me briefly point out how we have done in the area of AIDS.

Between December 6 of last year and March 13 of this year, we approved three protease inhibitors, the new class of antiviral drugs in AIDS, the most promising class of AIDS drugs that we have seen. We approved the first of these drugs, saquinavir, in 97 days. The second drug, ritonavir, was approved in 72 days, and only 24 hours after an advisory committee gave us their recommendation. And indinavir, the third protease inhibitor, was approved in just 42 days, an alltime record for the agency.

We have consistently been the world leader in approving treatment for AIDS, from AZT in 1987 to DDI to DDC to D4T to 3TC in 1995. Every single AIDS antiviral drug was introduced first here in the United States. All seven of the eight were first here, we tied for first with AZT. But as doctors and nurses and scientific professionals, everyone at the FDA knows that it is not enough to be fighting just one disease. Let me just show you some of the important drugs that FDA approved well ahead of our other counterparts in other nations: taxol, for ovarian cancer; fludarabine, for chronic lymphocytic leukemia; DNase, for cystic fibrosis; beta-seron for multiple sclerosis; riluzol for Lou Gehrig's disease, ALS.

In the third report we decided to look for ourselves at how well the agency was performing in terms of important new drugs being made available to American patients in a timely fashion. We looked at our performance compared to our counterparts in the United Kingdom, Germany, and Japan, and found that we compare very well. First, there are numerous drugs with important therapeutic values that are available here, but not in these other countries. Second, virtually all of the drugs available in these other countries but not approved here have therapeutic equivalents in the United States. And third, the U.S. is first to approve a significant proportion of global drugs that ultimately are approved by more than one country. These conclusions were based on our analysis of the new

molecular entities introduced anywhere in the world between 1990 and 1994. Let me give you just a brief glimpse of the details.

There were 58 drugs that were approved in both the United Kingdom and the United States. We approved 30 of them first, the United Kingdom 28. When we approved a drug first, we did so by an average of 17 months before the United Kingdom. If they approved it first, they were ahead by an average of 15 months.

There were 44 new drugs approved in both the United States and Germany. We approved 31 of them first, Germany 13. When we approved a drug first, we did so by an average of 17.9 months before Germany. If they approved first, they were ahead by an average of 10.8 months.

There were 14 new drugs approved in both the United States and Japan. We approved 10 of them first, Japan 4. When we approved a drug first, we did so by an average of 22.4 months before Japan; if they approved a drug first they were ahead by an average of 18.5 months.

The bottom line is this, Mr. Chairman and members of the committee, if you are an American patient you have access to therapeutically important new drugs sooner than any other country's citizens. The greatness of our system is that we are fast when we need to be fast, and we are careful when we need to be careful. We can have it both ways in this country. We can maintain the highest standards in the world and get drugs on the market as fast as our foreign colleagues. And while there is always room to do better, we have proven that we can do this job as well as anyone else in the world.

Thank you, Mr. Chairman.

PREPARED STATEMENT

Senator COCHRAN. Thank you, Dr. Kessler. We have your complete statement, and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF DAVID A. KESSLER

Mr. Chairman, members of the committee, it is a pleasure to appear before you as we present the 1997 Food and Drug Administration budget proposal.

We are fully conscious of the need to provide the best government services for the taxpayers' dollars. It is therefore most satisfying that we can support our request for essentially the same budget as last year with evidence that FDA is providing critical public health protection, and that the agency's performance is continuously improving.

FDA's activities, which ensure the quality of \$1 trillion worth of products, are always too numerous to list in our annual budget presentation. Last fiscal year was no exception, and I will only mention a few of its highlights to illustrate the agency's continuing strides to promote and protect the public health.

FDA's Center for Devices and Radiologic Health certified 10,200 mammography facilities from coast to coast, thereby improving the quality of mammography for all women. This program, mandated by the Mammography Quality Standards Act of 1992, was implemented in record time to meet the Congress-specified timetable. By the end of this year, an estimated 185,000 American women will be diagnosed with breast cancer. The new mammography standards and the mandated inspection program now in force will improve the chances that their disease will be detected in early stages, when it can be best treated.

A significant FDA proposal published last year outlined a new patient information program that creates private market incentives to provide useful written information with each filled prescription for drugs. The proposal is designed to increase patients' familiarity with the drugs they use, their potential adverse effects and the importance of the prescribed regimen. Studies have shown that lack of such infor-

mation significantly contributes to widespread medication misuse that adds an estimated \$20 billion to the nation's annual health care bill and causes great losses in productivity.

As part of the Vice President's National Performance Review, FDA last year proposed substantial changes in the way we regulate drugs, medical devices and medications made using biotechnology. The six regulatory proposals to reform the regulation of biologics represent the most significant overhaul of regulation of well-characterized biotech-derived drugs ever attempted by the agency. In essence, FDA proposed to completely harmonize its regulation of such products across the agency.

For most biotech drugs, FDA will eliminate its existing requirement that manufacturing plants be licensed; do away with the existing requirement that test results for each individual lot of biotech drugs be submitted to the agency after the product has been approved by the agency; and the agency will consolidate its 21 different application forms for biotech drugs into one form.

These and the other proposed changes in device and drug regulation will save the companies product development time and tens of millions of dollars, without lowering FDA's high standards of safety and efficiency.

We took a major step to improving the safety of our seafood by issuing the final rule instituting in the industry the so-called HACCP (Hazard Analysis and Critical Control Points) system, which focuses on preventing problems before they occur and designing safety into the processing of seafood.

Finally, FDA made one of its potentially greatest contributions to the nation's public health by proposing new ways of keeping cigarettes and smokeless tobacco products out of the reach of our teenagers. More than 400,000 Americans die each year of lung cancer, respiratory illnesses, heart disease and other smoking-associated diseases—more than the combined annual toll of AIDS, alcohol, car accidents, murders, suicides, illegal drugs, and fires. Since smokers almost always become addicted to nicotine in tobacco during their teenage years, our proposal has the potential of sparing this country enormous amount of personal suffering, lost productivity, and medical expenditures.

I could cite many other activities carried out by the agency in its daily work to protect American consumers and promote the public health. But I believe that what puts FDA's performance most clearly in perspective are three recent reports which probe one of the agency's most frequently criticized core functions, the drug review process.

Two of these reports were submitted to Congress. One is the agency's review of last year's progress in implementing the Prescription Drug User Fee Act (PDUFA), and the other, a General Accounting Office (GAO) study of FDA's drug approvals, was released in October. The third document is FDA's own analysis of the agency's performance in the international arena by comparing the American patients' access to important new drugs with access to such drugs by patients abroad.

Taken together, these three reports profile in depth the invigorating change in the FDA culture actually began some years ago as the agency added modern, efficient management techniques to its traditionally solid scientific base.

This trend is best reflected in the drug review times achieved since the 1992 passage of PDUFA, under which the agency committed itself to very high performance standards. The annual goals rise steeply each succeeding year.

We already have achieved one major 1997 performance goal. We achieved it in fiscal year 1994—a full three years ahead of schedule. For the drugs submitted to FDA in fiscal year 1994, we reviewed and acted upon 96 percent of them on time. In most cases, this meant first action occurred within 12 months.

In addition to the new drug applications, PDUFA sets the pace for the agency's review of two types of supplementary applications—dealing with effectiveness and manufacturing—for resubmitted applications, and for elimination of backlogs. Rather than reiterating the extensive data from our report to Congress, I can summarize last year's results in all of these categories as being on target or ahead of schedule.

The PDUFA performance targets were established in 1992 in a three-stage process that we regard as a model for reinventing government. First, Congress, government experts, the industry and consumer groups developed a consensus on performance goals. Next, we agreed on the timetable when these goals have to be reached. And last, but equally important, FDA was given the necessary resources to make the program work.

Although greatly assisted by PDUFA, FDA's faster drug reviews cannot be solely credited to the Act. The agency's advance toward shorter approval times started in the late 1980's, when FDA scored significant performance improvements. These early advances are documented in the second report I mentioned. GAO's study of "FDA Drug Approval" tracked the agency's handling of new drug applications

(NDA's) submitted from 1987 to the end of 1992, and found solid evidence of progress.

"We found a considerable reduction in approval time . . ." the report states. "It took an average of 33 months for NDA's [new drug applications] submitted in 1987 to be approved but only 19 months on average to approve NDA's submitted in 1992. Further, the reduction in time was observed for all NDA's and not just for those that had been approved . . . [T]he consistency of all our results supports the conclusion that the reduction in time is real . . ."

GAO also compared the most recently available data on the speed of drug approvals in the United Kingdom and the U.S. The report concluded that while comparisons between the British Medicines Control Agency and FDA are difficult for a variety of reasons, "the most recent data show that overall approval times are actually somewhat longer in the U.K. than they are in this country."

For us, the GAO comparison of FDA's performance with its British counterpart confirmed a fact which is not widely known and even less acknowledged: the agency leads the world in rapid and efficient review and approval of new drugs.

Evidence of the agency's performance can also be seen in our response to the AIDS epidemic. FDA makes a maximum effort to speed all needed therapies to those who are suffering. In the last four months of 1995, for example, the agency approved 15 drugs for the treatment of cancer. But our progress in approving new breakthrough drugs has been particularly notable in AIDS therapies, all but one of which have been made available in this country well ahead of the rest of the world.

AZT, the world's first effective antiretroviral, was approved here in March, 1987, at about the same time as in France and United Kingdom, and a month ahead of Germany. DDI, the second antiretroviral, received FDA's approval seven months ahead of France, ten months ahead of Germany, and 28 months ahead of the U.K. DDC was allowed on the American market a year and a half ahead of France and Germany, and 27 months ahead of the U.K.

D4T, the fourth drug against AIDS, was approved in France, Germany and the United Kingdom in January of this year. In the U.S., it was approved in June 1994. 3TC, which FDA approved in November 1995, is yet to be approved elsewhere. Saquinavir and zalcitabine, the two antiretrovirals that FDA approved since last December, are also awaiting foreign approvals. The review of saquinavir took 97 days, and zalcitabine was approved in just 72 days, a new record for the AIDS therapies. Both products are protease inhibitors, the first new class of AIDS drugs since AZT.

Other important drugs that FDA approved well ahead of its counterpart agencies included taxol for ovarian cancer, fludarabine for chronic lymphocytic leukemia, dornase alpha, also called DNase or Pulmozyme, for cystic fibrosis, Betaseron for multiple sclerosis, and riluzole for Lou Gehrig's disease.

To more fully evaluate FDA's worldwide standing, we last year performed a study comparing the availability of new drugs here and in England, Germany and Japan, the countries which together with the U.S. account for 60 percent of global pharmaceutical sales.

Our analysis focused on 185 new drugs—out of the worldwide total of 214—that were launched in at least one of the four surveyed countries between January 1990 and December 1994, the most recent five-year period for which we could get the data.

Once the data base was assembled, we asked a number of questions: First, we wanted a two-country comparison between the U.S. and each of the other three countries to see, comparatively, when drugs were approved. In every case, for the time period studied, the U.S. was the first to approve more of the drugs that eventually became available in both countries.

Of the 58 drugs that were approved both here and in the U.K., 30 were approved first in the U.S. The U.K. was ahead of us in approving the remaining 28. But if our edge over the U.K. was only slight, the disparity between us and the other two countries was much bigger. We were first in approving 31 of the 44 drugs approved both in the U.S. and Germany, and we were ahead of the Japanese in allowing marketing of 10 of the 14 compounds eventually used in both countries.

When we looked at the comparison of when these drugs became available to patients, there were other surprises. Of the 30 drugs that reached our market ahead of the U.K., we were faster than the British by an average of 17 months. Of the 28 drugs that the U.K. sent to market first, their average lead was not quite 16 months. In comparison with Germany, we get drugs that both countries approve to the market about 18 months faster—on average—than the Germans when we market the drug first. They get to market on average of 11 months faster than us when they approve it first.

When a drug is approved in both the U.S. and Japan, the U.S. gets it to market on the average nearly two years before the Japanese. When they approved a drug first, they did so by an average of about 19 months.

But what about the drugs that have been approved in those other countries, but not approved in the U.S.? Do European and Asian citizens have important pharmaceuticals available to them that are not available in America? And if so, are these drugs clinically significant?

Of all the therapeutics from these 214 on the market worldwide that we have not approved, only a small handful could be considered important molecular entities—i.e., drugs that offer at least a modest therapeutic advance over existing products, or can be used to treat conditions for which no therapy now exists. Everything else is a standard drug with an essentially equivalent product already on the American market.

Here is what we found: In England, there are 29 drugs from this therapeutically important group that are not approved in America. Conversely, we have 18 drugs on the market that they do not.

When we studied the list of drugs they had but we did not, we found two that we thought might be priority drugs. One was remoxipride, which appeared to be a promising new treatment for schizophrenia. The English approved it, but as more and more patients took the drug, it was found that in some of them it caused the bone marrow to shut down, causing aplastic anemia, a life-threatening disease.

The other drug was centoxin, a biotech product of an American company to treat sepsis caused by gram negative bacteria. It was also approved in the U.K., while FDA did not find that the submitted data demonstrated safety and efficacy. We asked the company to carry out another study which eventually showed that the drug did not work, and that it might actually increase the risk of patient death.

Both of these drugs have been taken off the world market.

There is one other set of international data that bears on an issue of current interest. As the agency's review and approval times have grown shorter, we have heard increasingly frequent claims that the overall time to develop a drug has grown longer. If true, this would be a disturbing trend.

FDA has not been able to conduct its own study of overall drug development times, but there is some information in the literature that does not support these statements. According to a recent study by the Centre for Medicines Research, a private organization that works closely with the Association of the British Pharmaceutical Industry, there has been no real change in drug development times since 1980. The Center checked the development time of 700 drugs in 20 countries—including the U.S.—and found that between 1980 and 1994, the mean development time varied between 10 and 12 years. In 1994, it was 11.5 years.

Drug development time before an application is submitted to FDA is influenced by factors that in most cases are not under the control of the agency. To such extent as the agency can facilitate the process by clarifying to sponsors what studies are needed to win rapid approval for their products, we are committed to do so. When it comes to potentially unique life-saving drugs, FDA time and again takes the initiative to work hand in hand with the drug developers to expedite the approval process. Fast access to new drugs and devices ranks at the very top of the concerns of the agency.

Important as they are, drug approvals are only one of many concerns of FDA, whose responsibilities include thousands of products of importance to the public health.

The agency has also made improvements in the times for the review and approval of medical devices. With respect to the so-called 510(k) process, through which 98 percent of all medical devices evaluated by FDA reach the market, the average review time in fiscal year 1995 was 137 days, down 24 percent from the 184-day average in fiscal year 1994. The average review time for those devices needing premarket applications (PMA's) is still too long, but we are making progress there as well. The average PMA review time in fiscal year 1995 was 20 months.

It is important to remember, however, where the Agency was in the 1980's. Congress found—as did FDA—that the scientific and medical standards for the review of medical devices were lacking. FDA looked at devices the way an engineer would, and we failed to focus sufficient attention on whether the device would actually make the patient better. Congress told us to do better, and we have. The clinical standards for medical device reviews have been bolstered significantly, and now we are hard at work on reducing the review times.

We are making similar efforts to increase the timeliness and predictability of our action on food and color additive petitions. First, in order to address the backlog of pending petitions, we have allocated additional resources to the program: 23 additional agency scientists have been reassigned temporarily to the food additive pro-

gram; the agency is awarding contracts for expert review of certain portions of food additive data packages; and one and one-half million dollars have been spent on enhanced computing facilities for the program. With these efforts we will begin to see a decrease in the petition inventory.

In addition to these added resources, we instituted a threshold of regulation policy under which indirect food additives that do not present any substantial safety concerns are exempted from the petition process. The agency processed 47 submissions under this new policy in 1995.

This review of FDA's performance would be incomplete without at least a brief reference to the many activities undertaken in pursuit of our mandate as a science-based consumer protection agency. FDA investigators were involved last year in hundreds of cases involving the manufacture, imports or distribution of dangerous or potentially hazardous products.

One example of their activities involved a Massachusetts shrimp company which was adulterating its products with three chemicals: it used saccharine to overcome an undesirable taste, sodium hydroxide to alter the color, and sodium tripolyphosphate to increase the yield. The president of the company was convicted on 101 counts and sentenced to three years in prison, to be followed by two years of supervised release.

Another important consumer protection action, carried out in cooperation with the U.S. Customs Service and the U.S. Department of Agriculture, halted the smuggling into the U.S. of large quantities of clenbuterol and other unapproved drugs that were then mixed in feed sold to veal producers throughout the Midwest. Clenbuterol is used in some countries to increase muscle in animals, but traces of the drug in meat products have caused outbreaks of food poisoning in France and Spain. FDA discovered that the drug was reaching this country when it appeared in animals shown in agricultural competitions. The indicted Wisconsin feed distributor is awaiting sentencing.

Finally, FDA's criminal investigators continue to play a leading role in shielding the public against dangerous product tampering. A recent case which they helped to swiftly resolve in cooperation with FBI involved the tampering of a baby formula and an attempted blackmail. The suspect was apprehended before his scheme caused any bodily harm, and has been indicted by a federal grand jury.

All of our activities follow the two principles that have traditionally guided Congress and FDA in setting regulatory policies: products that are important for the public health must be safe and effective. If a drug or a medical device is not safe, it should not be approved or allowed to harm consumers. If it does not work, it is of no value to the public, and has no justification in the market place.

These principles are a proven success. They have made FDA's rigorous product evaluation a lasting and effective shield for the nation's public health, and have helped make American therapies and devices sought-after throughout the world.

We are determined to maintain those standards, Mr. Chairman. We will be fast—and keep on working at getting faster—while continuing to protect the public health. The principles of safety and effectiveness, speed and caution are not at cross purposes: they work in harmony for the benefit of the American consumer, whose health is our most important achievement.

Turning to FDA's fiscal year 1997 budget request, the Administration's budget includes a total FDA request of \$1,024.2 million. This consists of \$878.4 million in budget authority, \$106.3 million in authorized user fees and \$39.5 million for two new user fees proposed for legislation. The budget authority is maintained at the fiscal year 1996 level. The user fees reflect modest increases in existing user fees and the two new proposed additive user fees, for Medical Devices and Imports. Without an increase in non user fee areas, FDA is absorbing cost increases necessary for the agency to carry out its primary mission. The highlights of our fiscal year 1997 request are as follows:

Food Safety Initiatives +\$3.8 Million

FDA proposes a series of Food Safety initiatives to address current concerns and to meet the safety issues we are likely to encounter as we enter the 21st century. The initiatives include expedited implementation of the new Seafood HACCP regulation (\$1.2 million); Federal and state partnerships to enhance food safety (\$1.2 million); and new approaches for the review of food additive petitions (\$1.4 million). For fiscal year 1997, FDA is applying a \$3.8 million increase to its operating base to cover the anticipated fiscal year 1997 cost of these initiatives.

Buildings and Facilities -\$3.8 Million

The fiscal year 1997 budget request for Buildings and Facilities of \$8.4 million is \$3.8 million below the fiscal year 1996 level. The requested \$8.4 million will en-

able the Agency to maintain its many facilities nationwide by addressing only our most urgent repair and improvement requirements.

Mammography Quality Standards Act (MQSA) + \$0.4 Million (user fees)

In fiscal year 1997, federal and state personnel will inspect 10,000 mammography facilities and conduct 3,000 facility certifications. To meet the costs of the program, FDA requests an increase in MQSA authorized inspection user fees of \$0.4 million for a total of \$13.4 million and 35 FTE's.

Prescription Drug User Fees Act (PDUFA) + \$2.8 Million

FDA requests an increase of \$2.8 million in fiscal year 1997 and estimates total user fees of \$87.5 million and 700 FTE to implement PDUFA in fiscal year 1997. As envisioned in the Act, this level of support will enable the Agency to diminish significantly the time necessary to review new prescription drug and biological product license applications. In fiscal year 1997, 90 percent of filed New Drug Applications (NDA) and Product License Applications/Establishment License Applications (PLA/ELA) submissions are to be reviewed within 12 months.

In addition to the existing user fees, FDA will be seeking separate legislative approval of the following additive user fees:

Medical Device Review—User Fees + \$24.5 Million

FDA is requesting \$24.5 million in additive user fees, to be collected from the medical device industry. These application fees will enable the agency to promptly review device applications. If user fee legislation is adopted, we have committed to making decisions on 510(k) applications within 90 days. Ninety-nine percent of all premarket applications are filed under section 510(k). We have also committed, in connection with user fee legislation, to review the more complicated PMA applications within 180 days.

For fiscal year 1997 the user fee goal is to increase the percentage of 510(k) applications completed within 90 days from 50 percent in fiscal year 1995 to 90 percent, and to increase the percentage of first review cycles for PMA's completed within 180 days from 45 percent in fiscal year 1995 to 75 percent. The proposed user fees will also help to increase industry guidance, strengthen postmarket monitoring, improve the Agency's ability to assess public health risks, and upgrade automation capabilities and integrate program information systems.

Import Inspection Enhancement—User Fees + \$15.0 Million

FDA is proposing to collect \$15.0 million in additive import user fees to fund the Operational and Administrative System for Import Support (OASIS). The system is expected to enable the agency to substantially reduce the risk of potentially harmful foods and other imported products reaching the American market place. The importer/broker community benefits through faster turn-around times, elimination of large volumes of paperwork, and reduced costs of doing business. OASIS will give FDA staff access to historical information to better target high risk products and firms, the ability to plan inspections more effectively, and the ability to share findings from inspection and lab analyses with other offices.

Reinventing FDA - Under Development

- Third party review pilot program for medical devices
- Harmonized application for all drugs and biologics
- Elimination of GRAS substance reviews
- Reform of food additive petition process
- Greater use of the private sector in monitoring imported foods
- Relaxation of animal drug exports (requires statutory change)
- Elimination of medicated feed application (requires statutory change)
- Elimination of antibiotic and insulin monographs (requires statutory change)
- Automated management processes (SMART)
- Automated import entry system (OASIS)

Reinventing FDA - Completed

- Eliminated establishment licenses for most biotech drugs
- Eliminated lot release for most biotech drugs
- Allowed use of pilot facilities for biological drug development
- Eliminated FDA review of hundreds of medical devices
- Implemented new food safety system (using performance standards)
- Eliminated FDA approval of manufacturing changes for drugs and biologics
- Eliminated medical device "Reference List"
- Published policy statement that new drugs not be proved more effective than other drugs
- Relaxed medical device export policy
- Provided exemptions from most environmental impact policy

Twelve Month User Fee Goals

Applications submitted in:

FY1994 55% on time

FY1995 70% on time

FY1996 80% on time

FY1997 90% on time

Twelve Month Review*

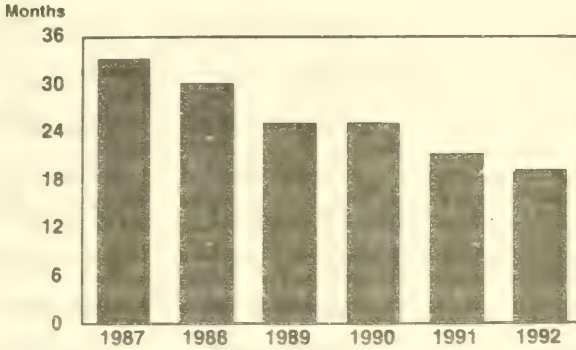
New Drugs and Biologics

Actual 96% on time

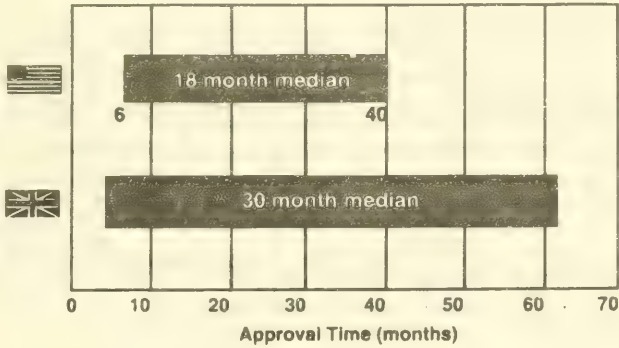
Goal 55% on time

* If major amendment submitted late in the process, an additional three months is granted.

General Accounting Office Analysis of Average Drug Approval Time 1987- 1992







GAO Comparison of US/UK Approval Time - 1994







Antiretrovirals Currently Approved For HIV infection & AIDS-related conditions

<u>Product</u>	<u>Approval</u>	<u>Review Time to Approval</u>
AZT	March 1987	3.5 months
ddl	October 1991	6 months
ddC	June 1992	8.5 months
d4t	June 1994	6 months
3TC	November 1995	4.5 months
saquinavir	December 1995	3 months
ritonavir	March 1996	72 days
indinavir	March 1996	42 days

Dates of Approval

	Indinavir	ritonavir	saquinavir	3TC	d4T	ddC	ddl	AZT
	March 1996	March 1996	December 1995	November 1995	June 1994	June 1992	October 1991	March 1987
	Not yet approved	Not yet approved	Not yet approved	Not yet approved	January 1996	January 1994	May 1992	March 1987
	Not yet approved	Not yet approved	Not yet approved	Not yet approved	January 1996	January 1994	August 1992	April 1987
	Not yet approved	Not yet approved	Not yet approved	Not yet approved	January 1996	September 1994	February 1994	March 1987

Dates of Approval

	Fludarabine	Taxol	Dornase Alpha	Interferon Beta-1B	Riluzole
	April 1991	December 1992	December 1993	July 1993	December 1995
	May 1994	November 1993	March 1994	November 1995	Not yet approved
	Not yet approved	November 1993	September 1994	November 1995	Not yet approved
	November 1994	November 1993	January 1994	November 1995	Not yet approved

New Drugs Approved in US But Not in UK

- BENAZEPRIL
- CEFPROZIL
- DEZOCINE
- DOXACURIUM CHLORIDE
- FELBAMATE - RESTRICTED IN US - 1994
- GALLIUM NITRATE
- HALOBETASOL
- HISTRELIN
- IMIGLUCERASE
- INTERFERON ALFA-N3
- INTERFERON BETA-1B
- MASOPROCOL
- MERIEUX VARICELLA VACCINE
- PEGADEMASE BOVINE
- PEGASPARGASE
- STAVUDINE (d4T)
- SUCCIMER
- TACRINE

Priority drugs in *italic*

New Drugs Approved in US But Not in Germany

- CEFPROZIL
- CLADRIBINE
- DEZOCINE
- DOXACURIUM CHLORIDE
- FACTOR VIII - rDNA (KOGENATE)
- FELBAMATE - RESTRICTED IN US - 1994
- FLOSEQUINAN - WITHDRAWN WW 1993
- FLUDARABINE
- FLUOSOL - PERFLUOROCARBON
- GALLIUM NITRATE
- HALOBETASOL
- HISTRELIN
- IMIGLUCERASE
- INTERFERON ALFA-N3
- INTERFERON BETA-1B
- LODOXAMIDE
- LOSARTAN
- MASOPROCOL
- MERIEUX VARICELLA VACCINE
- MIVACURIUM
- MORICIZINE
- NEFAZODONE
- PEGADEMASE BOVINE
- ROCURONIUM BROMIDE
- SALMETEROL
- SARGRAMOSTIM (GM-CSF)
- SERTRALINE
- STAVUDINE (d4T)
- SUCCIMER
- TACRINE
- TRIMETREXATE
- VENLAFAXINE

Priority drugs in *Italy*

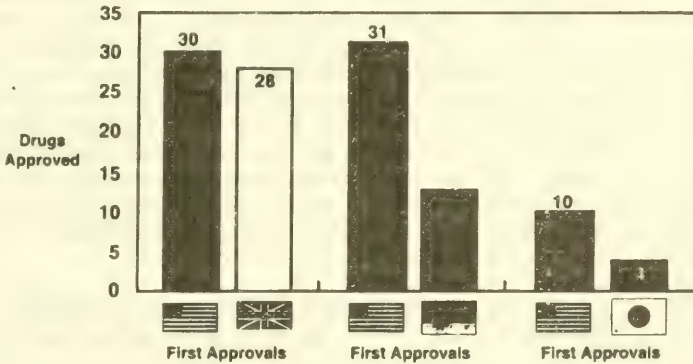
New Drugs Approved in US But Not in Japan

- ALGLUCERASE
- ATOVAQUONE
- CALCIPOTRIOL
- CEFPROZIL
- CLADRIBINE
- COLFOSCERIL
- DESFLURANE
- DEZOCINE
- DORNASE ALFA
- DOXACURIUM CHLORIDE
- EFLORNITHINE
- FACTOR VIII - rDNA (RECOMBINATE)
- FAMCICLOVIR
- FELBAMATE - RESTRICTED IN US - 1994
- FINASTERIDE
- FLOSEQUINAN - WITHDRAWN WW 1993
- FLUDARABINE
- FLUOSOL - PERFLUOROCARBON
- FLUVASTATIN
- FOSINOPRIL
- GABAPENTIN
- GALLIUM NITRATE
- HALOBETASOL
- HEPATITIS A VACCINE - HAVRIX
- HISTRELIN
- IDARUBICIN
- IMIGLUCERASE
- INTERFERON ALFA-N3
- INTERFERON BETA-1B
- INTERFERON GAMMA 1B
- KETOROLAC - WITHDRAWN GER 6/93 & FRA 12/93
- LAMOTRIGINE
- LEVOCABASTINE
- LODOXAMIDE
- LORACARBEN
- LOSARTAN
- MASOPROCOL
- MERIEUX VARICELLA VACCINE
- MILRINONE (IV)
- MIVACURIUM
- MORICIZINE
- NEFAZODONE
- PACLITAXEL (TAXOL)
- PAROXETINE
- PEGADEMASE BOVINE
- PEGASPARGASE
- RIFABUTIN
- RISPERIDONE
- ROCURONIUM BROMIDE SALMETEROL
- SALMETEROL
- SARGRAMOSTIM (GM-CSF)
- SERTRALINE
- STAVUDINE (d4T)
- SUCCIMER
- SUMATRIPTAN
- TACRINE
- TAZOBACTAM (COMBO)
- TEMAFLOXACIN - WITHDRAWN WW 8/92
- TORASEMIDE (TORSEMIDE)
- TRIMETREXATE
- VENLAFAXINE
- ZALCITABINE (DDC)

Priority drugs in *Italy*

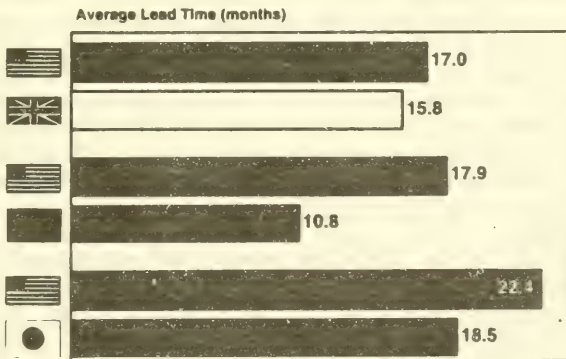
Who is first?

Drugs approved in both countries



How much faster?

Drugs approved in both countries



SMALL BUSINESS REGULATORY FAIRNESS ENFORCEMENT ACT

Senator COCHRAN. Dr. Kessler, because my colleagues are here and have questions, I am going to defer to each of them before I ask any questions. Senator Bond was here and started the hearing, which I appreciate very much, so we could move right along. I am

going to recognize Senator Bond first, and then Senator Bumpers, for whatever comments or questions they may have.

Senator BOND. Thank you very much, Mr. Chairman. I have to attend several other hearings this morning, as is quite common around here, but prior to my departure I want to express my congratulations to Dr. Kessler for the 96-percent success rate. I am also impressed with the speed and conviction with which these drugs are being approved. I have a wide range of questions today, but I wanted to touch first on something that is of great interest to the ranking member on this committee who also happens to be my ranking member on the Small Business Committee.

The Senate and House recently passed, and the President signed, a measure called the Small Business Regulatory Fairness Enforcement Act, legislation which provides for congressional review of agency rulemaking. And as I indicated to you in a prior conversation, I intend to ask the same questions of all agencies that come before the Appropriations Committee. Are you familiar with this new congressional review statute?

Dr. KESSLER. Yes, I am, Senator.

Senator BOND. Do you expect the FDA to issue any major final rules before year end that would be subject to congressional review statute?

Dr. KESSLER. I think we would probably be in that category. Let me ask Bill Schultz to answer more specifically.

Mr. SCHULTZ. Certainly, the medication guides rule that Dr. Kessler mentioned may be in that category. It is a very difficult issue whether or not it is a major rule. There may be one or two others. The administration is now formulating guidelines for exactly how to implement that statute, and there is a lot of effort that has been put into that in the last few weeks.

Dr. KESSLER. Senator, the administration and the agency firmly supported the legislation that you led and Senator Bumpers led. We have always done, and will continue to do, that kind of reg flex analysis for small business. I think it has worked well. Certainly there is no better story, I think, than the food labeling story and how we had to change the label of literally billions of packages in the supermarket, and have tried to do that in a thoughtful way.

Not every company is a big, huge company, and what we did is we allowed different timeframes to come into compliance that I think that the industry across the board has applauded. So we take it very seriously.

Senator BOND. Well, that was going to be my second question—the Regulatory Flexibility Act—where it applied to the small business, and I want to return to the issue momentarily. In the meantime, Mr. Schultz, you said the med—

Mr. SCHULTZ. That may be in the category.

MAJOR REGULATIONS AND SMALL BUSINESS

Senator BOND. Which rule was that? These rules are not limited to small business, but these are the major?

Mr. SCHULTZ. Yes; this is the one that would deal with the issue of patient information on prescription drugs. The rule would not actually go into place until the year 2001. That may be in the category.

Senator BOND. And when do you expect to issue that ruling?

Dr. KESSLER. There is a proposed rule that is out, and in fact that proposed rule was designed specifically to take into account small business. In fact, in setting goals, the goals that were set in that proposal were the 75-percent level of pharmacies coming into compliance, the other 25, specifically because there are small independents. So we are very sensitive. In fact, they are exempted. So we are very sensitive.

Senator BOND. Under what level?

Dr. KESSLER. Under?

Senator BOND. You said who is exempted?

Dr. KESSLER. I would be happy to provide that—I mean, in the proposed rule.

Senator BOND. Yes; if you would.

[The information follows:]

On August 24, 1995 FDA published a proposed rule on "Prescription Drug Product Labeling; Medication Guide Requirements". This rule, as proposed, includes the following statement under Section XII. D., "Small Pharmacy Exemption", on page 44219:

"FDA believes that compliance with the requirements for Medication Guides could have a significant impact on the operations of many small, independent pharmacies. The agency therefore proposes to exempt from most of the Medication Guide requirements any retail outlet that dispenses an average of fewer than 300 prescriptions per week, as long as total company annual sales do not exceed \$5.0 million."

Senator BOND. Just to go back to the record, on the major rulemakings, what other rules?

Dr. KESSLER. There are a number, and if I can just submit for the record, Senator, I will be happy to submit. I just want to be accurate.

Senator BOND. I would be pleased if you would submit that information together with the dates they are expected to be published. Additionally, please inform us of any small business regulations that you intend to issue. There are two, the major rules and the small business regulations. If you would submit for the record what these rules are and when.

Dr. KESSLER. We can give you an approximate date.

Senator BOND. I understand.

Dr. KESSLER. If you can give us some flexibility on this, we do not know exactly when these things will emerge.

[The information follows:]

The Department of Health and Human Services publishes a semiannual report on its regulatory agenda which is a list of upcoming issuances including brief abstracts, priorities, and action dates. The following is the FDA section of the most recently issued Semiannual Regulatory Agenda.

[CLERK'S NOTE.—Due to its length, the Semiannual Regulatory Agenda will not appear in the hearing record, but is printed in the Federal Register of Monday, May 13, 1996, pp. 22958-22998.]

ST. LOUIS DRUG ANALYSIS LAB

Senator BOND. Now, as I mentioned to you a moment ago, we are concerned about the closing of the Division of Drug Analysis in St. Louis. Could you lay out the reasons you have proposed to relocate the employees to the Washington, DC, area? I understand the lab lease expires in 1999 and that you expect to achieve some savings. Could you give us an idea why the closing was proposed and how much you plan to save?

Dr. KESSLER. Currently, that laboratory has 43 FTE's with an annual operating budget of \$375,000. That is a laboratory that does drug analysis for our Center for Drug Evaluation and Research. The bottom line is one of efficiency. We have approximately 20 different laboratories across the United States and in district offices, and it is one of efficiency. I mean, there is a critical mass, especially with science advancing and equipment becoming higher and higher tech. How do we deal with making sure that our scientists have state-of-the-art equipment, and with that becoming increasingly expensive? So it is a very important function, but we are trying to be efficient, especially in a budget that, with the exception of user fees, is pretty much flat-lined this year.

We did make a proposal to close it. It came out of a number of our senior managers and center directors who have looked at it. We are in the process of reviewing it, Senator.

Senator BOND. Are you familiar with the GAO study, "FDA Laboratories, the Magnitude and the Benefits Associated With Consolidation Is Questionable"?

Dr. KESSLER. Yes; we have that. And I think we are going back, we are looking hard, we are making sure that the analysis is solid.

Senator BOND. I would ask that you utilize the good ideas provided in the GAO study in analyzing this decision and perhaps submit for the record your analysis on that.

Dr. KESSLER. We would be happy to, Senator.

[The information follows:]

The process of reviewing the earlier decision on closing the St. Louis drug analysis laboratory is under way. This will include a very careful look at all pertinent factors and will certainly give full consideration to the comments provided by the GAO relative to FDA's field laboratory consolidation.

Senator BUMPERS. I hope you will check with me on the definition of good before you do that.

Dr. KESSLER. Senator, you can be sure we will check with all members of this committee, I promise.

Senator BOND. Mr. Chairman, there are other members who want to ask questions and I know that the Commissioner is short on time. I would like to ask the same regulatory flexibility and review questions of the other agencies. If possible, I would prefer that the ranking member pose the questions while he is here. Alternatively, I will submit them for the record so that we may ascertain how other agencies intend to comply with both the major review and the regulatory flexibility provisions. Thank you very much for your kindness in allowing me to proceed.

Senator COCHRAN. Thank you, Senator.

Senator Bumpers.

SMALL BUSINESS REGULATORY FLEXIBILITY

Senator BUMPERS. Thank you, Mr. Chairman. First I want to thank Senator Bond for his tenacity in questioning the agencies about the reg flex bill that we passed out of the Small Business Committee, and to say that both of us take considerable pride. Senator Bond mentioned this morning some story. I do not know if it was in the Post. It indicated that somehow or other that bill had been hidden, secreted away in a larger bill, and passed unbeknownst to the Members.

The truth of the matter is it was debated extensively on the Senate floor, and passed 100-zip. We take considerable pride in that bill because we think the small business community of this country is going to be measurably helped by that.

So I applaud his efforts to elicit that kind of information from all the agencies, just to make sure that we will be holding additional hearings on the implementation of that.

DIFFICULTY OF COMMISSIONER'S JOB

Dr. Kessler, you have not had many kind words recently, so I would like to offer some. I would like to say, first of all, those charts on the work you are doing and the approval procedures are most impressive.

Dr. KESSLER. Thank you, Senator.

Senator BUMPERS. I just whispered to the chairman a moment ago that I would not have your job for all the tea in China. [Laughter.]

He said he did not think there was any danger of either one of us being offered the job. [Laughter.]

One of the things in my 22 years in the Senate that has troubled me more than anything else is the badgering that good public servants who give up high-paying jobs in the private sector to come here and head up not just FDA but literally dozens of other agencies, and then they come up here and the bullies on this side of the desk have a free-for-all in badgering honest, hardworking people, where misjudgments, even slight negligence, and even now political differences are almost becoming criminal offenses.

And so you are in a catch-22 situation. If you approve a drug prematurely and it turns out a few years down the pike, and often it takes years before you realize maybe it should not have been approved, and people die or become incurably ill or suffer all kinds of untoward consequences, you take the blame for that. And yet, the hue and cry in this country now is that you are too slow, you are not approving these fast enough.

I looked at those protease inhibitors and the length of time it took you to approve them. I have some very dear friends who are HIV positive, and I cannot sleep at night thinking about it sometimes. And God knows if I had a child or a brother or sister, anybody else in that category, I would want you to approve those drugs immediately. I do not see anything wrong with that. But the people in this country have a tendency to take leave of their common sense when they debate these issues. So I just want to say that when you have people who are suffering terminal cancer or any other terminal disease, and a drug with promise that has been experimented with by the company that developed it and so on, and you look at all the data, you ought to approve those expeditiously.

I can remember a very good friend of mine in absolutely unbelievable pain as a cancer patient, and his sister was worrying about him getting hooked on drugs. They are just giving him too many sedatives. Well, you know, how silly can you get? And so I think that people in this country with HIV positive, terminal cancer patients, and so on, they have a right to expect expeditious licensing of drugs which have shown promise. And I think these protease inhibitors show promise. They may not. I do not want to be crass

about that, but you say, so what? It is a risky business, and you take that chance.

So, you see, the reason I would not have your job is you are damned if you do and you are damned if you do not. Some people are going to die from expeditious approval of these drugs, and you are going to take the consequences of that. On the other hand, some people who probably are not in life threatening positions but would really like to have these drugs as early as possible, you have a duty to do everything you can to protect their health against giving them a prematurely approved drug.

So I thought your charts were impressive and struck a good balance. I know everything is not perfect at FDA, just as it is not anyplace else. But let me ask you a specific question about prescription drug labeling.

MEDICATION GUIDES

You have said that you think that widespread medication misuse because of an inadequate label could be costing the country \$20 billion annually in health care costs. Is that a correct statement?

Dr. KESSLER. Yes, sir; in fact, while Jason is putting up that chart, can I just respond for a second?

Senator BUMPERS. Sure.

Dr. KESSLER. I think that the members of this committee deserve enormous credit in allowing us to get that 96 percent on time review for prescriptions 3 years ahead of schedule. The members of this committee in 1992, worked with the industry, and worked with us, recognizing that there were not enough dollars in the budget and that we had to find creative ways to do things. The leadership of this committee allowed this agency to work with the pharmaceutical and the biotech industry to establish a user fee program which was not simply about dollars, but also allowed us to change our performance. It built upon that success started back in the 1980's to really help American patients and do it safely. Anyone could allow more drugs, get drugs out quicker. You can always open the gates. Anyone could do that. The real goal is how do you get drugs out faster but still keep the standards and be able to sit here and tell you that we have speeded it up without lowering the standards that the American people have come to demand with regard to safety, that is what we have done. And it is the leadership of this committee over the years that has allowed that to happen.

Senator BUMPERS. Let me ask you now—perhaps, Mr. Schultz, you want to answer this question about drug labeling. First of all, have you allowed a comment period on this proposal?

Mr. SCHULTZ. Yes.

Senator BUMPERS. Have the medical profession, the doctors of the country been invited to comment on your proposal?

Mr. SCHULTZ. Yes; we have had a 90-day comment period and we have had public meetings. I think they have participated in both.

Senator BUMPERS. What is the status of it, and when do you expect to implement it, or are you already in the process?

Mr. SCHULTZ. In the proposal, we stepped back and took a very different approach in which we said that there is a lot of promise to the private market. There is a lot of activity involving pharmacies voluntarily providing information to people. Some of it is

very adequate and some of it is not adequate. We have devised a program that would actually not go into effect until the year 2001, and would only go into effect if the private market does not work. Between now and then, our role would be providing guidance, giving advice, and helping the private market get to a place where the information that people are getting through the pharmacies' own programs is adequate and useful.

That is what the proposal was, and the comment period has closed. Now we are trying to incorporate those comments and come up with an approach that can get support.

Senator BUMPERS. In the past, when you approved a drug for public use, did that approval also carry a proposed labeling or a required labeling of that drug?

Mr. SCHULTZ. Yes; but that labeling is really directed at physicians. Except for a very small number of drugs, the patients do not receive any labeling that is required. Any sort of information that you get in a pharmacy today, except for a handful of drugs, is voluntarily provided by the pharmacies. Because of computers in the last few years, that activity has grown, and we are very hopeful that the private market can do this on its own with Government guidance, but not Government regulation.

Senator BUMPERS. You know, normally when you get a prescription drug a doctor will tell you of any anticipated side effects you might expect and that sort of thing. But how about the over-the-counter drugs?

Mr. SCHULTZ. We also have a program in which we are working with the over-the-counter drug trade association and the companies to modernize the over-the-counter drug label as well. The information is now on the label, but it is not usable. They are very interested, and we are very interested, in doing something like what we have done with the food label for over-the-counter drugs. That is also a high priority for the agency.

Senator BUMPERS. Well, tell them also at the same time to increase the size of the print, will you?

Mr. SCHULTZ. That is one of the big issues that we are struggling with.

Senator BUMPERS. I have to get a flashlight and a telescope.

Mr. SCHULTZ. That is a big issue.

Dr. KESSLER. We have learned from the food label. When we did the new nutrition label, one thing that we spent a lot of time on, and we worked with senior citizens among a whole array of individuals, to make sure that we would have it done in ways that were readable and understandable. It is something that was very important to us. We spent a lot of time on the graphics, just how the information can be conveyed simply so people want to read it, can use it. And as you say, Senator, there is a real problem with over-the-counter drugs. I mean, I sit there squinting and trying to read very important dosage information. But we are working very cooperatively and the nonprescription drug manufacturers really have taken significant leadership and they want to improve their label, and we are doing it cooperatively.

THIRD-PARTY APPROVAL

Senator BUMPERS. Dr. Kessler—this will be my last question, Mr. Chairman—I wanted to ask you your thoughts on this proposed third-party approval. Just on the face of it I do not think I like it, but I am reserving judgment on it because I do not know enough about it. But how can you guarantee the independence and objectivity of a third-party contractor?

Dr. KESSLER. It is one of the great questions about that proposal, Senator. I, too, have very serious reservations. There may be a specific place for it to test it to see whether it works in certain limited fashion. But I would be much more inclined to get evidence first of whether it works before turning over any system 100 percent to it.

But you are right, the bottom line of a third-party review, the greatest concern is that it will end up with individuals being able to forum shop, to buy their own review. That is the worst-case scenario, but it is a real concern, Senator.

Senator BUMPERS. Let me just say, Mr. Chairman and Dr. Kessler, based on the charts you have just shown us and your track record right now on approvals, I do not see a necessity for it. It seems to me that you are doing a very adequate—commendable job, for that matter—in licensing these drugs. If I were going to do anything—as I say, especially for those drugs that do not serve people who have life-threatening conditions, you may be going a little too fast to suit me. But I certainly do not feel quite the same way about devices that I do about the drugs.

But all I am saying is, you have got a question of who is going to reimburse these people? Are we going to have conflicts about who is paying for it, and that sort of thing?

Dr. KESSLER. What I would like to do, Senator, because our drug record really is exemplary. We have worked very hard as an agency to do the work over the last decade to be able to get where we are. In devices it is a whole different set of questions. We are working to try to increase the scientific standards of device review to make sure that devices work and do what they say. We have more of a row to go as far as timeliness; certainly with more complex devices.

What I would propose, and what is in this budget, but what I would hope we can debate and talk about in the context of FDA reform is taking the lessons that we have learned from the drug area on prescription drug user fees and thinking about how that could thoughtfully be applied to solve other problems, Senator.

LABORATORY CONSOLIDATION

Senator BUMPERS. Dr. Kessler, one other question. How much money have you asked for construction in your budget, for the lab consolidation program.

Dr. KESSLER. Let me let Bob Byrd answer that question, the Deputy Commissioner for Management.

Senator BUMPERS. Mr. Byrd.

Mr. BYRD. For the laboratory consolidation or headquarters?

We have a field laboratory consolidation program, and in the Washington, DC, area, a headquarters consolidation program. That is a program for which \$84 million has been appropriated to GSA.

Senator BUMPERS. How much?

Mr. BYRD. \$84 million funded for site acquisition, design, and construction of facilities for the Center for Food Safety and Applied Nutrition in Prince Georges County. We are pretty close to acquiring the site for that facility, and expect completion of the project by the year 2000.

For the Montgomery County area, which is a separate portion of the headquarters consolidation, we only have about \$14 million of funds appropriated to GSA remaining for that. And the proposed site of that facility is at the old Naval Surface Warfare Center at White Oak. We anticipate funding for that.

Senator BUMPERS. Mr. Byrd, could you supply me—and I do not want to take up Senator Cochran's time—could you supply me with a list, the chronological proposal of your lab consolidation proposals?

Mr. BYRD. Yes, sir.

Senator BUMPERS. The timeframe in which you expect to do these things, and the cost, essentially the proposed costs?

Mr. BYRD. Yes, sir.

Senator BUMPERS. Thank you.

[The information follows:]

LABORATORY CONSOLIDATION PROPOSALS

In 1994, FDA received approval from the Secretary DHHS to proceed with streamlining laboratory operations. FDA's plan calls for the creation of 5 large multipurpose laboratories (Seattle, WA, Los Angeles, CA, Jefferson, AR, New York, NY and Atlanta, GA) and 4 specialty laboratories (San Juan, PR, Winchester, MA, Philadelphia, PA, and Cincinnati, OH) for a total of nine field labs replacing current network of eighteen over 20 years (1994–2014). We project a cost savings of \$90.5 million. Correspondingly, FDA will maintain inspection, public affairs and enforcement operations at the current District offices and resident posts. In fiscal year 1995 and 1996 appropriations, FDA received appropriations for the design and land acquisition for the Los Angeles and Arkansas new facility.

FDA has formulated Building and Facility (B&F) plans including new construction, expansion, restructuring, and decommissioning, as well as personnel transfers plans which carry out the 21 Laboratory Consolidation goals and coincide with current facility lease expiration dates. The following is a description of planned actions as they relate to our multipurpose labs and specialty labs.

FDA 21 MULTIPURPOSE LABS

New York. Northeast Regional Laboratory, Northeast Regional Office and New York District Office-Jamaica, Queens. Authorization for prospectus approved in 1994 with delineated area in the Borough of Queens. A&E POR prepared for 75,000 net sq. ft. laboratory and 100,000 net sq. ft. regional, district office facility. In fiscal year 1996 GSA/FDA finalized negotiations for the 4.5 acre site at York College, Jamaica Queens. By June 1996, GSA and FDA to complete review of nine (9) Developers Offers for construction of new facility. GSA to award lease by August 1996. FDA occupancy scheduled for February–March 1999.

Arkansas Regional Laboratory. In fiscal year 1995, Congress authorized \$2.5 million for A&E design for the Arkansas Regional laboratory (ARL). ARL A&E design to be completed by March 1996. In fiscal year 1996, \$3.8 million appropriated for joint ARL/NCTR facility. Fiscal year 1996 funds are planned to construct A&E design items: 1) animal quarantine facility (\$2.9 million) and 2) general purpose lab facility (\$0.9 million). ARL facility construction is estimated at \$36 million. Construction funds have not been approved.

Los Angeles-University of California at Irvine. In fiscal year 1995, \$9.8 million appropriated for A&E design and land acquisition. By March–April 1996, FDA, through the Corps of Engineers, will award an A&E design contract, estimated at \$2.5 to \$3 million, and acquire the 13 acres of land, estimated at \$5 million, at University of California at Irvine. LOS new facility construction is estimated at \$36 million. Construction funds have not been approved.

Southeast Regional Laboratory. In fiscal year 1996, GSA has issued a sole source SFO to construct a 42,000 net square feet of lab and lab support space facility adjoining the current FDA complex at 8th and Peachtree Streets. GSA projects FDA occupancy by June 1997. B&F funds allocated for renovation: 1) to replace current fume hoods and 2) establish AAALAC animal facility costing \$1.7 million. Renovation projects to be completed by the end of 1996.

Seattle Laboratory. In fiscal year 1996, 5,000 square feet expansion and occupancy completed. B&F funds allocated to establish AAALAC animal facility costing \$150,000.

FDA 21 SPECIALTY LABS

Cincinnati—Forensics Chemistry Center and Cincinnati District Office. Decommissioning of the current facility is to begin in 1996 with \$650,000 allocated for this purpose. A prospectus was approved in 1992 for 31,170 net square feet of laboratory space and 13,930 net square feet of office space. GSA and FDA have reviewed A&E POR plans for the new facility. GSA received developer offers March 1, 1996. GSA to award lease by June, 1996. FDA occupancy scheduled for late 1997–early 1998.

Philadelphia. GSA proceeding to expand current facility by 8,378 square feet and accommodate 16–20 additional laboratory staff. FDA occupancy of new space on floors 10 and 12 at US Customhouse by early 1997.

San Juan. FDA and Commonwealth of Puerto Rico have agreed to land agreement. FDA to renovate/expand facility to house 20–25 total laboratory employees by 2000.

Winchester. B&F funds allocated to establish an AAALAC animal facility costing \$100,000. AAALAC facility to be completed by 1996.

Other Facility Activities

Decommissioning: Decommissioning schedules have been established for each closing laboratory upon lease expiration. In fiscal year 1996, B&F monies totaling \$2.6 million have been earmarked for these facilities decommissioning activities, namely: Buffalo, Cincinnati, Chicago, and New Orleans. In fiscal year 1997, decommissioning activities will commence for Baltimore, New York (Brooklyn complex) and Los Angeles (Pico Blvd. facility) estimated cost at \$1.95 million. In fiscal year 1998, decommissioning activities will commence for Dallas, Minneapolis and Detroit, estimated cost at \$1.95 million.

Personnel Activities

Lateral Transfer Process. In fiscal year 1995, nineteen laboratory employees voluntarily transferred from closing labs to ORA 21 laboratories. Fiscal year 1995 transfers cost \$825,000. ORA plans to continue to fund this process through fiscal year 1996–1999.

FDA CORE MISSION AND PRIORITIES

Senator COCHRAN. Thank you, Senator.

Senator McConnell.

Senator MCCONNELL. Thank you, Mr. Chairman. At the risk of seeming like one of those bullies behind the table that Senator Bumpers was talking about, I am going to take a slightly different view from my good friend from Arkansas. Dr. Kessler, I am very concerned about the manner in which the Food and Drug Administration has chosen to allocate its resources. I am especially concerned that the FDA is devoting too high a percentage of its resources to the staffing and lower priority areas.

This committee has been prodding the FDA to devote more of its resources to its product approval process. Specifically, last year this committee directed the FDA to operate within its resource constraints by refocusing its efforts on its core functions and reducing unnecessary costs. The committee also, quote, strongly encouraged the agency to increase resources from lower priority areas in order to make substantial progress in its device review performance. In light of these requests, I would have thought the FDA would have

reallocated FTE's from lower priorities to the medical device approval process.

Dr. Kessler, I think you have testified on prior occasions that your budget reflects your priorities. If this budget reflects your priorities, and I think it should, then I believe your priorities are out of step with your core mission. For the past year and a half, Congress and the American people have been communicating one clear message to the FDA, speed up the review of drugs and medical devices. I know that you have stated that this is the FDA's No. 1 goal. And I appreciate that the FDA has made some progress in reviewing new drug applications. But when it comes to innovative medical devices, I do not see any improvement and I do not see serious commitment.

Now, Mr. Chairman, I am going to ask that my full statement be made a part of the record, and I know that Dr. Kessler has a time problem; I would like to ask some of my questions now.

I want to make it perfectly clear, and I am sure this is true of everyone up here, that I support the core mission of FDA to protect the public health. I understand the need for, and support FDA regulations that protect public health. I do not support overregulation or regulations that do not make sense. Because I understand how important regulation is to FDA's performance of its core mission that I am deeply troubled by FDA's failure to promulgate its regulations in a timely manner, and I have several pages of examples here, but I will just read a couple.

FDA has proposed regulations to protect the safety of the Nation's blood supply by, among other things, requiring blood establishments to quarantine blood received from HIV-infected donors. Over 7 years after FDA started working on these regulations, FDA has still not issued rules.

I will give you another example. FDA has proposed regulations to prevent the sale of counterfeit drugs. Over 3 years after FDA first announced this rulemaking, FDA still has not issued rules.

Another example is mandated by the Nutritional Labeling and Education Act amendments of 1993. FDA has proposed regulations to lessen the cost of regulations on small business. Over 2½ years after enactment, FDA still has not issued rules.

I also had one, two, three, four, five, six, seven other examples, Mr. Chairman, I would like to make a part of the record.

PREPARED STATEMENT

Senator COCHRAN. Thank you, Senator, your full statement will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR MCCONNELL

I am very concerned about the manner in which the Food and Drug Administration has chosen to allocate its resources. I am especially concerned that the FDA is devoting too high a percentage of its resources to staffing in lower priority areas. This committee has been prodding the FDA to devote more of its resources to its product approval process.

Specifically, last year this committee directed the FDA to "operate within its resource constraints by refocusing its efforts on its core functions and reducing unnecessary costs." The committee also "strongly encouraged the agency to increase resources from lower priority areas in order to make substantial progress [in its device review performance]."

In light of these requests, I would have thought the FDA would have reallocated FTE's from lower priorities to the medical device approval process.

Dr. Kessler, you have testified on prior occasions that your budget reflects your priorities. If this budget reflects your priorities—and I think that it should—then I believe your priorities are out of step with your core mission.

For the past year and a half, Congress and the American people have been communicating one clear message to the FDA: speed up the review of drugs and medical devices. I know that you have stated that this is the FDA's number-one goal, and I appreciate that the FDA has made some progress in reviewing new drug applications, but when it comes to innovative medical devices, I do not see any improvement, and I do not see serious commitment.

As you know the review of complex new medical devices is a critical function of the FDA. For the past year, the Senate Committee on Labor and Human Resources has conducted oversight hearings on the operations of the FDA, including an exploration of the negative impact the FDA is having on the growth of the medical technology industry in the United States.

The General Accounting Office issued a report on the FDA's performance with respect to medical device review on October 30, 1995. I am particularly concerned about the FDA's performance with respect to the most innovative medical devices, those devices requiring a PreMarket Approval Application. The General Accounting Office reported that, as of May 18, 1995, the FDA had 126 PMA applications that were still pending, and the average number of days pending per outstanding application was 829 days and counting. This demonstrates that the FDA continues to lag far behind its statutory responsibility to review complex medical devices within 180 days.

In your statement you say, "We already achieved one major 1997 performance goal. We achieved it in fiscal year 1994—a full three years ahead of schedule. For the drugs submitted to FDA in fiscal year 1994, we reviewed and acted upon 96 percent of them on time. In most cases, this meant first action occurred within 12 months."

While it is true that FDA has made some progress in its review time of new drug applications, the misleading character of your comments is not. The standard to which you appear to be referring are goals that you specified in letters to Congress and were included in the legislative history of the Prescription Drug User Fee Act. Your comments ignore the 180-day new drug application review time clearly stated in the Federal Food, Drug, and Cosmetic Act. Such omissions do not enhance your credibility. The most important measure of the FDA's performance is its role in helping to foster an environment in which innovative advances in medical technology can be brought to market quickly in order to benefit patients. By this standard, the agency is failing badly. Ever-increasing regulatory requirements imposed by FDA have lengthened the time it takes for companies to prepare and submit applications.

I believe the FDA has caused total product development time to increase, even as it appears to be reducing NDA review times. While the FDA trumpets this accomplishment, it imposed an ever-expanding regulatory burden that has caused the development time for new drugs to nearly double since the 1960's.

Throughout your statement you suggest that drugs are no longer available in Europe before they are approved by the FDA and made available to the American public. The truth is that of all the FDA's new drug approvals from 1985 to 1993, only 27 percent were approved first in the United States. Fifty-four percent were available in a foreign market for one or more years prior to FDA approval; 12 percent were available in a foreign market for ten or more years prior to FDA approval. On average, the drug lag between Europe and the U.S., in the same period was one year, and between Japan and the U.S. two years.

These delays have very real consequences for patients in this country. It is no longer debatable that America is lagging far behind Europe in providing our citizens access to the latest in health care technology. Congressional testimony has indicated that our medical device products in many cases are generations behind Europe. This includes lifesaving technology like cardiovascular devices.

It is clear that the sluggishness of the FDA approval process is doing harm to our economy and national health. The evidence is plain that our medical technology companies are responding to FDA's inefficiencies by relocating their operations overseas. That means a loss of good-paying, high-tech jobs here at home.

According to a recent survey conducted by Price Waterhouse and the University of California, 77 percent of companies that manufacture or plan to manufacture medical products outside of the U.S. have located their operations based on faster foreign approvals of new products, and 68 percent have done so because of less onerous regulatory requirements.

Dr. Kessler you have testified before Congress that the FDA has a particular responsibility to review applications for new food additives with great care. I agree that additions to the food supply must be handled with great care. But great care does not mean that FDA should be able to drag out the approval process for new food additives for years at a time. The backlog of food additive applications remains very high and the agency is not even close to meeting its statutorily mandated review time.

U.S. law requires FDA to approve or deny food additive applications within 180 days. For the ten petitions approved in fiscal year 1995, the average review time was 48 months—eight times longer than permitted by law. Further, as of March 31, 1995 30 petitions submitted before January 1, 1990 were awaiting FDA action.

Such delays rob companies of earnings from their additives for years and thus discourages innovation, while doing nothing to protect the public from potentially dangerous additions to the food supply. These delays deny the health benefits available through many of these additive to all consumers.

From 1990 to 1994 the staffing for food operations increased slightly, by 3 percent, but the additional resources were focused disproportionately on senior level management. In other words, the FDA devoted none of the additional resources to staff that could actually reduce the delays in approving food additive petitions.

This is not an acceptable state of affairs, and I welcome the effort of my colleagues to bring comprehensive FDA reform legislation to the floor of Congress.

However, I do not believe that the problems at the FDA can be solved by reform legislation alone. There is critical need for leadership. And by leadership, I mean a committed focus on the responsibilities that Congress has delegated to the FDA.

I would now like to address another issue I am deeply concerned about—tobacco. Let me first note that all Members of Congress share the concern regarding the incidence of tobacco use among our youth. My issue with the FDA is not about kids and tobacco, because we all agree on that issue; put simply, we all agree that kids shouldn't smoke or chew tobacco.

I have three main concerns with the FDA regarding its proposal to regulate tobacco. First, Congress, not an unelected federal official, is empowered to make new law. And, it is clear that Congress has never authorized the FDA to regulate tobacco. In fact, on numerous occasions Congress has specifically rejected proposals to grant FDA authority to regulate tobacco.

Second, a new federal bureaucracy to address youth smoking is not necessary. Americans do not want children to use tobacco products, but Americans also do not want another ineffectual federal bureaucracy to address a problem better handled elsewhere.

Third, the FDA's pursuit of expanded jurisdiction has distracted the FDA from its statutory mission. The FDA has spent valuable resources pursuing the regulation of tobacco when it is clear that it does not have any statutory authority over tobacco. The resources that continue to pour into this action by the FDA should have been spent improving the FDA's performance in product reviews.

In December I was joined by more than 120 of my colleagues in the House of Representatives and by 32 fellow Senators in a letter addressed to the FDA which expressed Congress' objection to the FDA's effort to expand its jurisdiction.

For decades, it has been almost universally acknowledged that the FDA lacks jurisdiction over tobacco. This is a view shared by every FDA Commissioner who preceded you.

Not only have you failed to respect the lines drawn by Congress, you have wasted valuable agency resources in the process. In response to my previous inquiries regarding the resources the FDA has spent on tobacco, you indicated that by the end of fiscal year 1996, the FDA will have spent nearly ten million dollars on this power grab. By my calculation, if we assume a total annual cost of \$100,000 for each additional product reviewer, the FDA could have employed nearly 30 additional product reviewers over this three-year period.

To make clear the impact that an additional 30 product reviewers would have on the approval process, last year the FDA employed 60 primary reviewers for the pre-market review of innovative medical devices. An additional 30 reviewers would have increased the number of PMA reviewers from 60 to 90, a dramatic increase.

Commissioner Kessler, it is clear that the FDA does not need additional resources. Instead, the FDA needs to set its priorities straight.

While well agree that kids shouldn't use tobacco products, we do not believe that FDA regulation of tobacco is the proper solution. It is time for the FDA to reallocate its resources to accomplish its statutory mission. If the FDA isn't up to the task, I suggest that it is the responsibility of this Committee to get the FDA back on track.

I want to make it perfectly clear, I support the core mission of FDA to protect public health. I understand the need for, and support, FDA regulations that protect public health. I do not support over-regulation or regulations that do not make sense. I am deeply troubled by FDA's failure to promulgate its regulations in a timely manner.

I look forward to working with all of the members of this committee to make sure that the FDA's budget reflects the priorities of the American people.

All of this begs the question of how FDA is allocating its resources, which have been significantly expanded in recent years.

Thank you Mr. Chairman.

TIMELY PROMULGATION OF REGULATIONS

Senator MCCONNELL. My question is this, Dr. Kessler. This record of failure by your agency to promulgate regulations in a timely manner causes many people a lot of concern, and I am wondering what steps you will be taking to ensure that FDA does not let regulations like food additive, human drug, medical device, and animal drug petitions languish for years in your agency.

Dr. KESSLER. Senator, Mr. Schultz can give you the exact number of regulations that we have promulgated. I think, and I would be happy to submit it for the record, I think if you look at the number of regulations that we have promulgated over the last several years, you will see a history of probably one of the most productive agencies in the Federal Government. As far as timeliness of getting regulations out, we have been very, very productive.

[The information follows:]

FEDERAL REGISTER DOCUMENTS PUBLISHED BY FDA

	1994	1995	1996 (January 1 to May 15)
Final rules ¹	200	176	81
Proposed rules	53	66	45
Other	399	361	156

¹ All published final rules including food additive petitions, color additive petitions, device classifications, and new animal drug approvals.

Dr. KESSLER. Mr. Schultz, would you just care to list some of the regulations that I think the American people view as very important?

Mr. SCHULTZ. Would you like me to do that?

Senator MCCONNELL. Briefly.

Mr. SCHULTZ. We did a major regulation on what is called seafood HACCP at the end of last year, which will totally change the way seafood is handled and inspected by the agency.

In the device area, we have either issued or are very close to issuing regulations on good manufacturing practices, which deal with inspections. We are close to issuing regulations on humanitarian devices, which are devices for small populations.

MEDICAL DEVICE REVIEW

Senator MCCONNELL. Let me do this, if I may. I have seven other examples. I would like to get specific responses to these examples, if I could, Mr. Chairman and Dr. Kessler.

Dr. Kessler, I have heard you testify that FDA's performance is vastly improved when it really matters, for innovative products

with lifesaving potential. I would like to explore the validity of this contention for innovative medical devices, which you were referring to earlier. According to GAO, as of May 18, 1995, a total of 126 pre-market approval applications for innovative medical devices had been pending at the FDA for an average of 829 days per application. Does this undermine your statistic? Does this statistic undermine your claim that FDA rushes to bring critical new technology to the marketplace?

Dr. KESSLER. No; not at all, Senator. If you could get, Jason, just the backlog, you do raise a very important point, and it is a point that I just talked about with Senator Bumpers. Approximately 99 percent of devices come through the 510(k) route and we have made dramatic progress in getting that 510(k) backlog down.

You are correct that for the 1 percent of more complex devices, devices that are important, we still have an average review time of about 20 months. It is down somewhat, but it is not down enough. I would strongly urge the committee to consider what is in the President's budget, which proposes we take the lessons that we have learned from speeding up new drugs through the Prescription Drug User Fee Act, and apply it to devices. I would be very happy to work with you, Senator, because I think that while we have made progress on the 510(k)'s, and those represent about 99 percent of devices, they still are the simpler devices.

The complex devices are important, and I would like to speed them up. You are right, we have not done as good a job as we should in that area, and that is why I would like to take the lessons from the Prescription Drug User Fee Act, and that is, in fact, in the budget before you that is being presented today.

RESOURCES SPENT ON TOBACCO INQUIRY

Senator McCONNELL. OK, Dr. Kessler. On another subject, I have been trying for many months to get FDA to provide information on the resources the agency has spent on its inquiry of tobacco products. It was not until February 7, 1996, nearly 4 months after I requested expenditure data, that my office received some information on FTE's used and dollars spent in fiscal years 1994 and 1995. The information showed that FDA in 1994 used 19 FTE's and spent \$1.3 million on tobacco issues, and in fiscal year 1995 used 27 FTE's and spent \$3.5 million.

Because GAO is looking into this matter at my request, I provided this information to them. It has come to my attention that GAO has been unsuccessful in getting FDA to provide the details that support FDA's estimates. On March 1, 1996, GAO requested specific information relating to these estimates, including the names of all FDA employees involved in the above FTE estimate, their salary and time spent on tobacco issues, and a breakdown of the estimated costs, including expenditures for travel and salaries.

Now, it is my understanding that in early April information on the number of FDA and HHS employees working on tobacco issues was given GAO, is that correct?

Dr. KESSLER. That is correct, Senator.

Senator McCONNELL. Where does FDA stand at this point regarding its review of submitted comments on the proposed regula-

tion of tobacco, and when, Dr. Kessler, do you think this review will be completed?

Dr. KESSLER. Senator, the comment period opened on August 11, 1995. It closed on January 2, 1996. We received, in that comment period, approximately 710,000 submissions. We then reopened the comment period in mid-March, because we had additional statements that we thought the public should comment on. That comment period closed approximately—from this coming Friday—2 weeks ago. Those comments, as well as the 710,000 comments that came in in the prior comment period, are being given full and serious consideration, and we are moving ahead expeditiously with that process.

Senator MCCONNELL. I am curious about the impact that the assignment of FDA employees to work on tobacco issues may have had on FDA's other missions, such as the review and approval of medical devices and drugs. I wonder if you have any observations about that?

Dr. KESSLER. I have worked very hard, Senator. Certainly, the issue before the agency is nicotine—the jurisdiction of the agency and the proposed rule on preventing access and appeal of cigarettes to children and adolescents. In doing that we certainly have and will continue to use the best talent and scientific minds of the agency. But I have been very mindful of the fact that I did not want to place any additional burdens on our Center for Drugs and Center for Devices. And while we have worked with them, we have tried to do it in a way that has not had any effect on the review of drugs or devices.

Senator MCCONNELL. Could I ask you on that point, how does the number of employees assigned to work on tobacco issues compare with other recent FDA regulatory efforts?

Dr. KESSLER. I think in the food labeling context we received about 40,000 comments while here, we received 710,000. We are very committed to giving those full and serious consideration. A lot of people wrote in throughout this country. They deserve to have their comments well analyzed. So it is commensurate with the workload.

Senator MCCONNELL. So you have got more employees, then, working on this than any other area, I guess, given the number of comments you have gotten, is that what you are saying?

Dr. KESSLER. Let me let Bill Schultz answer.

Mr. SCHULTZ. We need to get back to you precisely.

Senator MCCONNELL. Dr. Kessler just said that it is 700,000 comments. Is that the proper terminology?

Mr. SCHULTZ. Yes.

Dr. KESSLER. 51 gigabytes of information, Senator.

Senator MCCONNELL. So is it reasonable to assume, then, that due to the multiplicity of comments, this is the largest area of concentration of employees?

Mr. SCHULTZ. We should get back to you precisely, but my sense is, for example, that the nutrition labeling probably took more actual agency employees because many of the issues were very complicated. We should look at some other areas, if you want us, and get back to you precisely.

Senator MCCONNELL. Yes; I was going to ask if this was the largest number of employees assigned to a particular regulatory effort since you became——

Dr. KESSLER. Certainly the largest number of comments that we have ever received.

Senator MCCONNELL. No; I am talking about the number of employees for you to deal with——

Dr. KESSLER. I understand. And we will be happy to get back to you on that, Senator.

Senator MCCONNELL [continuing]. Deal with them since you were Commissioner. Do you understand the question? Is this the largest concentration of employees——

Dr. KESSLER. I think the answer is no, but I would like to go back and get back to you in writing, if I may.

[The information follows:]

Both the tobacco and the food labeling initiatives are considered to be very large undertakings by the agency. However, when compared, the food labeling initiative was much more resource-intensive than tobacco.

Food Labeling.—At the time, the agency estimated that approximately 80 FDA employees worked virtually full time for three years, and that about 200 staff from throughout the Department of Health and Human Services were involved to some extent over that time.

Tobacco.—The tobacco initiative has involved approximately 19 full time equivalents in fiscal year 1994, 27 full time equivalents in fiscal year 1995, and the agency estimates that it will use approximately 10 percent more resources in fiscal year 1996 than in fiscal year 1995 and about the same number of FTE's.

PROPOSED REGULATION OF TOBACCO PRODUCTS

Senator MCCONNELL. Now, getting back to the earlier issue about the proposed regulation of nicotine, what is the timetable that FDA foresees regarding a final decision on a proposed regulation of tobacco products?

Dr. KESSLER. As I mentioned, Senator, we are working hard and we are moving expeditiously, but we are very committed to giving all those comments full and serious consideration.

Senator MCCONNELL. But that did not answer my question. I am trying to get a sense of when you might reach a final decision on this issue that you are working on.

Dr. KESSLER. And I apologize, but we are——

Senator MCCONNELL. You do not know, then, when you might issue a final decision?

Dr. KESSLER. We are working expeditiously, and we are looking at every issue that was raised in those comments, and we are analyzing those issues very diligently.

Senator MCCONNELL. In other words, you are not willing to give me some indication of when this regulation might be——

Dr. KESSLER. I think, Senator, I said that we are moving expeditiously, so I hope that gives you some general sense.

Senator MCCONNELL. It really does not, because I do not know what that—I mean, I know the definition of the word expeditiously. It is a word you use when you do not want to give a clear indication of when you might be completed and ready to issue your final decision.

Dr. KESSLER. No; I think if I did not have any indication I would tell you at some time in the future. I would say that. We are very serious——

Senator MCCONNELL. This year?

Dr. KESSLER. We are very serious about this issue.

Senator MCCONNELL. So you think it will be completed this year?

Dr. KESSLER. We are working very hard, Senator.

Senator MCCONNELL. This summer?

Dr. KESSLER. We are working very hard.

Senator MCCONNELL. Well, Mr. Chairman, I appreciate the opportunity to be here today. It seems to me it is pretty clear that the FDA does not need additional resources. Instead, the FDA needs to set its priorities straight. I am pretty troubled by FDA's failure to promulgate its regulations in a timely manner. All of this really begs the question of how FDA is allocating its resources, which have been significantly expanded in recent years.

I have got a variety of other questions I would like to submit for Dr. Kessler. I would hope to get more definite answers in writing.

Thank you very much, Mr. Chairman.

Senator COCHRAN. Thank you, Senator, and we request that the answers to all Senators' questions be submitted to the committee in a timely fashion.

Dr. KESSLER. We would be happy to do that.

Senator COCHRAN. I know Senator Burns has questions that he was prepared to ask, but because he has other responsibilities with another committee, he asked that those be submitted and answers provided for the record. I also have questions which I will submit.

FOOD SAFETY INITIATIVE

Let me just, in the few minutes that we may have remaining, ask you about the food safety initiatives. Your statement includes a request for \$3.8 million in additional funding for three categories of food safety initiatives. One is the seafood hazard analysis and critical control point system regulations that we have already heard about. Another is Federal and State partnerships to enhance food safety. And a third is new approaches for the review of food additive petitions.

Let me ask you how you propose to offset the cost of activities that you are already undertaking in these areas. Is this something that you are submitting to us as a sort of notice that you are going to reallocate funds that already have been appropriated? Are these additional funds? Are you going to offset this from other activities?

Dr. KESSLER. It is a reallocation.

Senator COCHRAN. It is a reallocation, so it is not an additional request?

Dr. KESSLER. No.

Senator COCHRAN. Well, let me ask you this, then: What kind of Federal-State partnerships are you contemplating for food safety?

Dr. KESSLER. Probably the most important, Mr. Chairman, are food inspections. Those are—and certainly in the higher risk areas, we already have very sophisticated partnerships, for example, in milk inspection. We share that responsibility with the States, as well as retail inspections. So it is at the inspection level every day. It is not very glamorous work.

Senator COCHRAN. But these are not new regulations that you are proposing to implement?

Dr. KESSLER. No; but the HACCP—

Senator COCHRAN. Are new regulations?

Dr. KESSLER. Yes; and that will involve also some additional State partnerships, because in monitoring our shores it is very important that we work with our States.

Senator COCHRAN. When are these seafood regulations effective? Are they already effective? You mentioned that you have completed work on the regulations.

Mr. SCHULTZ. I believe they are fully effective in 2 years, but during that period of time, many companies will start adopting them and start using them.

Senator COCHRAN. And what about the food additive initiative? What is that about?

Dr. KESSLER. What we would like to do is to bring down the review times for food additive decisions. Those are some of the hardest decisions we make, Mr. Chairman. When you add a food additive to the food supply of young people, old people, sick people, healthy people, hundreds of millions of people, you have got to get it right, and get it right the first time. And we have an enormous track record in doing it, but it takes us a long time. And I would like to be able to come back and show you in the food additive area what we showed you in the drug area, and that is the reason for setting those priorities, to try to reduce the backlog in food additive petition reviews.

Senator COCHRAN. Do you consider this a major new initiative in the agency, the food additive area? Is it a new problem? Are there any reasons why—

Dr. KESSLER. No; it is an old problem, Mr. Chairman, and when I came to the agency, the agency had already begun working in the drug area and getting drug review times down, and I focused a lot of our priorities on doing that and working with you on getting the drug review times down. The food additive problem has always been there; certainly, been there for many years. These are complicated decisions, and it is a focus, it is a realization that we have a responsibility when a petitioner comes in, even though these are weighty decisions, to make sure that we are as timely as possible, as well as keeping the standards what they are.

MEDGUIDE REGULATIONS

Senator COCHRAN. The medguide regulations are the regulations I think Senator Bumpers was discussing regarding the information that would be provided to prescription drug users, those who get drugs that have been prescribed by a physician. Normally, we do not have a lot of information. That is the problem, I suppose.

Dr. KESSLER. That is the \$20 billion.

Senator COCHRAN. I notice that most of that money is in hospital admissions that result from misuse or abuse of the prescription drugs in some way or another. I am as skeptical or more-so than Senator Bumpers about this whole process. It is not that I know enough about it to disagree and give you a list of reasons why I disagree with your moving in the way that you are on this. I just wonder whether or not it is worth, even though there is substantial cost here, doing what you are trying to do and whether there will be a correlation later between these new regulations and any changes in these numbers. I am skeptical about it, and I am also

skeptical about the costs that will be associated with compliance. Has there been any analysis of what this is going to cost in terms of compliance and who is going to end up having to pay it?

Dr. KESSLER. Yes, sir.

Senator COCHRAN. And will the drugs then become so expensive that we really cannot—nobody will be able to afford to buy drugs.

Dr. KESSLER. The great thing, Mr. Chairman, about advances in computer technology is that every pharmacist has the computer there on the counter. They have to, today, to be in business. I think it is 99 percent.

Senator COCHRAN. Yes; but all the rest of us do not have time or the training to read and understand all these technical things that will be provided and to analyze the ingredients ourselves and to know—to compare this thing handed to you with this thing of pills and compare that with what you got with other prescriptions. You will spend all of your time back at the doctor's office saying am I going to die if I take these two, is that not what that means?

Dr. KESSLER. Mr. Chairman, our job and the industry's job is to make sure that consumers who want the information have the information in a usable—and as Senator Bumpers said—readable fashion. There is no point to doing this if the information is not going to be understandable and readable and helpful. And the studies that have been done have shown that we can markedly reduce the costs of drug adverse reactions, if we give consumers information that they can use to take care of themselves. Speaking as a physician, the days when I as a physician had the answers and just handed patients a prescription, and did not give them the additional information so that they knew how to take their medicines and—

Senator COCHRAN. I want the doctor to figure all that out for me, and tell me what I ought to take and what I ought not to take. Heck, if I have got to make the decision based on some printed information from the drug store, I am in bigtime trouble.

Dr. KESSLER. No; but I think—

Senator COCHRAN. I am thinking of the older person, you know, who is going to be taking three or four different medications, maybe more.

Dr. KESSLER. As a physician, let me just speak to that. I think we all have to take responsibility in partnership with our physicians. As a physician, there is just so much time I have when I see a patient.

Senator COCHRAN. Why is the American Medical Association, the National Black Nurses Association, and I am told a number of other national associations opposed to this initiative?

Dr. KESSLER. Senator, in the 1500's, there was an English law that prohibited English physicians from giving information about what was in the medicine to patients. I am also not very proud to tell you that in the 1930's there was a regulation on the books of our agency that said information about drugs needed to be written in a fashion that was not understandable by consumers. It is a major culture change.

I think when you go into a drugstore in 1996 and someone hands you a bottle of pills, there is more information today on the food label about the fat content and the sodium content and the chole-

terol content. You do not have to read it, but I think that what we have heard, and what we have heard loud and clear, from patients and from consumers and from the public is that they want information. And for those who want to participate with their physicians in their health, it is very important as a physician for patients to know what to look for if there are potential adverse reactions; certainly, how to take their medicines. We cannot do this as physicians alone.

BLOOD AND BLOOD PRODUCTS SAFETY

Senator COCHRAN. Well, you are going to have to have somebody go with everybody to explain what they are reading. Anyway, I am skeptical. We are going to end up talking too much about this and drive everybody crazy.

There is a blood and blood products safety problem that you are very involved in helping to address, and I just want to pass on some concerns that have been passed on to me. I sent you a letter some time ago about this surveillance program for identifying the transmission of viruses such as HIV, hepatitis, and others. The hemophilia population in America has a foundation at work on this, a task force trying to improve the patient notification practices for users of blood and blood products. I am interested to know what steps you have taken to move forward on these recommendations and whether you think enough progress has been made by the agency in this area.

Dr. KESSLER. Senator, we have, among our highest priorities, the safety of the American blood supply and these kinds of steps. If a member of our family tonight needs a blood transfusion, and if a blood transfusion is warranted and you cannot self-donate, you do not have time, it is not elective surgery, that patient can have confidence that the blood is the safest ever.

We have taken some very dramatic steps. There is a very significant portion of the U.S. blood supply that is currently under consent decree today because we have been very rigorous in demanding the highest set of safety standards that we have built into the process. We have worked hard. We have worked hard with all the constituent groups on making sure it is safe. This is still a human tissue, and we need to recognize that, and while it is not risk free, it is safer today than it has ever been.

Senator COCHRAN. Well, we hope that you will continue to look at the suggestions being made by this foundation and other groups who have ideas of how we can do even a better job.

Dr. KESSLER. Absolutely.

Senator COCHRAN. Thank you so much, and we thank all the members of the panel who have been here today in behalf of our interests in understanding the budget request and the needs of this agency to do the job that it is required to do by law.

Dr. KESSLER. Thank you very much.

SUBMITTED QUESTIONS

Senator COCHRAN. Thank you very much. We will submit additional questions to be answered for the record.

We will stand in recess for a couple of minutes while those who are here with the FDA have an opportunity to leave the room. We will next hear from the Commodity Futures Trading Commission.

[A brief recess was taken.]

[The following questions were not asked at the hearing, but were submitted to the agency for response subsequent to the hearing:]

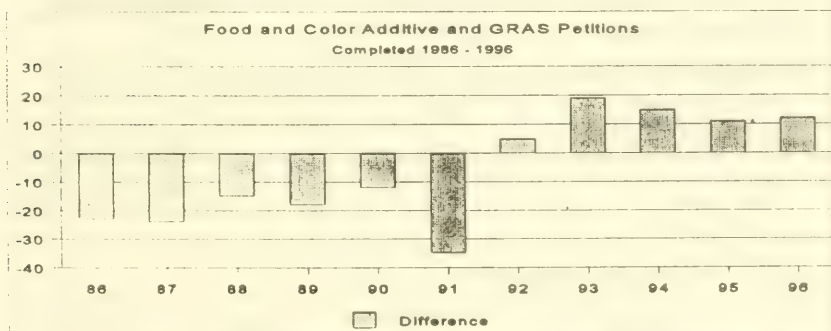
QUESTIONS SUBMITTED BY SENATOR COCHRAN

FOOD AND COLOR ADDITIVE PETITIONS

Question. Dr. Kessler, you indicate in your written statement that FDA has undertaken efforts to increase the timeliness and predictability of its action on food and color additive petitions; to do this, you have temporarily reassigned 23 agency scientists to the food additive program; FDA is awarding contracts for expert review of certain portions of food additive data packages; and \$1.5 million has been spent on enhanced computing facilities for the program. Why did action on food and color additive petitions become such an immediate problem? What is the backlog of pending petitions? Has it been growing? Why?

Answer. FDA has processed petitions for new uses of food and color additives since passage of the 1958 Food Additives Amendment and the 1960 Color Additive Amendments, respectively, to the Federal Food, Drug, and Cosmetic Act. Within the last decade, a growing inventory of pending petitions arose. Each year between about 1985 and 1991, FDA reached final decisions on fewer petitions than it received. The cumulative effect of this imbalance has resulted in the current large inventory of active petitions. I will provide, for the record, a graph which depicts this trend.

[The information follows:]



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996*
RECEIPTS	103	90	83	80	69	73	57	54	44	53	11
FINAL ACTIONS	80	66	68	62	57	38	62	73	59	64	23
DIFFERENCE	-23	-24	-15	-18	-12	-35	5	19	15	11	12

*Through April 1996; No Citizen Petitions

This imbalance was in part a result of too few review resources to conduct timely reviews. It also resulted in part from inadequacies in petition data for which FDA required resolution by the petitioner. During the review process, petitions are publicly considered "under review" by FDA even though for considerable portions of the time a petition may be back in the hands of the petitioner for further work. Under applicable regulations, the 180-day statutory "clock" is reset upon receipt of

substantial amendments to petitions. Nevertheless, the total time from receipt of the petition to issuance of a final decision may become quite long as a result. The statutory review and approval requirement of 180 days applies to food additive and color additive petitions only. Citizen Petitions and Generally Recognized as Safe (GRAS) petitions do not have statutory review and approval time requirements.

Over the past year or so, food and food additive industry representatives have brought their concerns to Congress, which has raised questions and held at least one hearing on the food additive approval process. Particular concern about the FDA's review of food additive petitions was raised by the Subcommittee on Human Resources and Intergovernmental Relations of the House of Representatives Committee on Government Reform and Oversight last year. In a hearing on the matter last June, we presented data indicating that of the 295 petitions then active in FDA's inventory, 84 were awaiting action by the petitioner, 19 were not yet accepted by FDA for filing, 192 were in active review by FDA, and that of these 192, 77 were in FDA's hands for greater than 180 days. I would like to provide, for the record, two tables that display these numbers.

[The information follows:]

ADDITIVE-RELATED PETITION DATA
1958 -- 1995

I. SYNOPSIS OF PETITION ACTIVITY:¹

TYPE OF ACTION	PERIOD OF 1970-1995	PERIOD OF 1958 - 1995
Direct Petitions Received	676	1334
Indirect Petitions Received	1451	3474
TOTAL RECEIPTS	2127	4808
DECISIONS MADE	1832	4513
CURRENT ACTIVE INVENTORY (see II. below)	295	295

II. CURRENT PETITION INVENTORY:²

STATUS	NUMBER
TOTAL INVENTORY	295
Awaiting Petitioner Action	84
Not Filed	19
In Review at FDA (Current Active Inventory)	192
Number of Complete Food and Color Additive Petitions in Review at FDA over 180 days	77

¹Includes Food Additive (FAP), Color Additive (CAP), and GRAS (GRP) Petitions; data approximate and obtained from FDA's "SIREN" database.

²As of April 18, 1995; includes FAP, CAP, GRP and Citizen petitions; data approximate and obtained from FDA's "MATS" database.

We have focused on the total cohort of 295 petitions as of that date. FDA committed to reaching a final decision on at least 100 of these petitions by the end of fiscal year 1996. As of April 30, 1996, 72 have been acted on. Further, the total current active inventory of pending petitions is shrinking, and is now down to 270. For the 12 months following May 1, 1995, FDA received 57 new petitions and reached final action on 82, of which 53 were approvals. Both of these numbers are higher than for any calendar year since 1986.

Question. From which activities did you take the 23 scientists you reassigned temporarily to the food additive program? How long will they be assigned to that program?

Answer. Twenty-three laboratory scientists were detailed to work for up to one year in the food additives petition review program. These persons are biologists, microbiologists, chemists, pharmacologists and nutritionists from several Offices within the Center for Food Safety and Applied Nutrition. Two individuals from the National Center for Toxicological Research are also working on petition review assignments.

Question. What additional funding is being provided for contract awards and enhanced computing facilities for the program? Where were those additional resources taken?

Answer. A total of about \$7 million has been allocated over the past two years for new outside contracts and enhanced computing facilities for the foods program. These funds will allow for improvements in the food additives petition process specifically, and the foods program as a whole. These funds were re-directed from lower priority areas in each of the program areas, including foods, as well as the Office of the Commissioner and other administrative areas.

Question. Please explain what computing facilities enhancement was made and why.

Answer. Enhancement of computing facilities for the food and color additive review program is currently ongoing. The upgrade of the facilities will permit, among other things; efficient electronic storage; indexing and retrieval of petition documents; improved communication links among reviewers; and institution of a workflow management and document tracking system. The upgrade has included improved structured wiring, installation of a local area network, and purchase of an optical scanning system with hardware and software to support the system enhancements.

Question. Please explain what contract awards were made, and the amount and purpose of each.

Answer. We recently issued Requests for Proposals for two contracts. One contract would purchase review resources to review scientific data from indirect food additives petitions; the other will focus on the review of toxicological studies within selected petitions. We will hold a pre-proposal conference for prospective bidders. Bids will be received during June, 1996 for both of these two contracts. Before an offer will be made, all bidders will be screened for conflict of interest, technical competency, and adequacy of business proposals.

Question. What savings, if any, is being realized by exempting indirect food additives that do not present any substantial safety concerns from the petition process?

Answer. Under the new Threshold of Regulation Policy, published in the July 19, 1995, Federal Register, FDA will grant an exemption from the full-blown petition process to indirect food additive uses that qualify under the terms of the policy. Processing such exemptions requires only a small fraction of the total resource expenditure required for the review of a corresponding petition and the issuance and publication of a regulation in the Federal Register. During the last year over 40 such exemptions were issued, giving us the opportunity to use our limited resources to review food and color petitions.

Question. Is the \$1.4 million requested for fiscal year 1997 for new approaches for the review of food additive petitions as part of FDA's Food Safety initiatives intended to address this situation on a permanent basis?

Answer. The \$1.4 million is intended to provide ongoing support to implement the comprehensive plan to improve the efficiency and overall functioning of the food additive petition review program. These funds will be used to improve the overall management of the program, undertake new approaches for petition review, including greater emphasis on pre-filing requirements and guidance to petitioners, and pilot programs to explore greater use of third parties for review purposes. For example, a "data audit" function could be carried out by outside parties, saving the agency scientists time and effort in their review tasks, reducing the total review time and allowing reviewers to focus more on those aspects of review that require scientific judgement. If our experience with the contracts is positive, we would explore the possibility of using outside resources for review of the studies supporting the safety decision. Of course, final determination of the safety of the use of the additive, however, would remain with the FDA.

Question. What other activities will be undertaken with this additional funding?

Answer. By expending these funds on the data review function, greater FDA resources could be allocated, for example, for pre-submission consultation with petitioners to assure that petitions are complete and well designed prior to being officially submitted to FDA. Resources spent in this way at the front end of the petition process would result in significant savings to industry and to FDA in staff

time spent in petition review because petitions would require less recursive review once in FDA's hands and would be more likely to be reviewed completely in one cycle.

MEDGUIDE REGULATIONS

Question. In August, 1995, FDA published a proposed regulation on patient package inserts, this regulation is also known as the "MedGuide" regulation. Dr. Kessler, you mention in your prepared statement that this new regulation will create private market incentives to provide useful written information with each filled prescription. However, I understand the state boards of pharmacy oppose this regulation. Is it true that the regulation of medical and pharmacy practice is a function of state governments?

Answer. The proposed rule does not regulate the practice of medicine or pharmacy. Under the Federal Food, Drug, and Cosmetic Act it is FDA's responsibility to regulate the labeling of drug products so that the products are safe and effective for their intended uses. Federal courts have affirmed FDA's authority to require patient labeling for prescription drug products, and that such a requirement does not interfere with the practice of medicine. FDA believes it has the responsibility and authority to promulgate a regulation designed to help ensure that patients using prescription drugs will receive material information about the proper use and effects of the drug products they are prescribed.

Question. I don't think that anyone could argue with ensuring that patients have accurate, reliable information about the drugs they are prescribed. However, it concerns me when proposals such as this are opposed by organizations such as the American Medical Association and the National Black Nurses Association. Why would organizations such as these oppose this regulation if it is as beneficial as you claim?

Answer. Both the National Black Nurses Association (NBNA) and the American Medical Association (AMA) agree with FDA that there is a serious need for increased patient access to better quality information on prescription drugs. According to the NBNA presentation at the patient information workshop, the NBNA is not opposed to this proposal. Instead, the NBNA asked FDA to address concerns that the proposal endorses efforts to excessively standardize written information, and that the proposal does not adequately address the importance of oral communication, particularly between the nurse and patient.

The proposal does not impose a requirement for standardization or "one size fits all." FDA's proposed regulations specify general standards and not the specific wording of these leaflets. Furthermore, FDA has continually asserted that written medication information is designed to supplement and reinforce oral interaction between the health care professional and the patient. The AMA is concerned about selected portions of the proposal, especially the purported "one-size-fits-all" nature of the information, and the Association's fear of FDA interference with the physician/patient relationship. Again, the proposal does not impose a "one-size-fits-all" regulation, nor is FDA regulating the practice of medicine or

interfering with the physician/patient relationship. The proposed rule is intended to supplement and augment traditional oral health care counseling. It should be noted as well that the proposed rule does not limit the information that health care providers may impart to patients. Instead, the proposal encourages discussions between the physician and patient.

Question. You say that this regulation is voluntary, but it is my understanding that this regulation mandates that drug manufacturers produce leaflets for up to 4 new drugs or drug classes each year, which must be developed in conformity with FDA guidelines. That doesn't sound "voluntary" to me. How is it so?

Answer. The program, for the majority of prescription products used on an outpatient basis, is voluntary. FDA believes that manufacturers, dispensers or information vendors can produce useful patient materials without need for such materials to be reviewed or approved by FDA. A few products or narrowly defined product classes each year pose specific "serious and significant" public health concerns that require the distribution of FDA-approved patient labeling. Without such labeling, FDA believes that these products cannot be safely used by the public. In the past, FDA has required, by regulation, that oral contraceptives and estrogen replacement therapies include such approved patient labeling. FDA has also requested that manufacturers voluntarily produce and distribute patient labeling for other products, such as Halcion and Accutane. In most cases, although not all, these requests have been complied with by prescription product manufacturers. Only a small number of products have required such FDA-approved patient labeling. We believe that this will continue to be the case in the future.

Question. I understand that the National Council on Patient Information and Education, a voluntary group of over 300 organizations, including FDA, has developed an action plan that would achieve the same goals as the FDA regulations, but this voluntary plan is supported by the organizations which oppose the FDA regulation. In fact, in the recent Senate Labor Committee mark-up of legislation to reform FDA, I understand that an amendment was adopted endorsing this voluntary plan over the FDA regulation by a vote of 13-3. Why are government regulations better than voluntary, private sector initiatives that achieve the same goal?

Answer. The key word here is "achieve." It has been over a decade since FDA withdrew regulations mandating patient package inserts for prescription drugs, which were to contain information about a drug product's benefits, risks and directions for use. At that time, FDA stated that mandatory requirements were unnecessary because the goal of improved patient education could be achieved through private sector initiatives. During the hearings that led to the withdrawal of the regulations, promises were made by representatives of the pharmaceutical, medical and pharmacy communities that if FDA withdrew the regulation, the private sector would develop a variety of systems that would meet the goals of the proposed regulation. These promises have not been fulfilled.

Question. What are the projected costs of promulgating and enforcing this regulation?

Answer. The expectation is that FDA would use fewer than three FTEs to review and approve mandatory Medication Guides and for communications and evaluation activities. Assuming that each FTE is about \$100,000, the cost would be less than \$300,000 annually. The surveys that will evaluate distribution rates of voluntarily produced patient information will cost about \$173,000. These funds have already been allocated because, since the early 1980s, FDA has monitored the private sector's progress toward dissemination of patient-oriented medication information. There would also be some minor, additional costs for assuring input of health care professional and consumer groups in the planning and implementation of this program.

Question. Is it really necessary, in these times of limited budget resources, for FDA to begin to review thousands of leaflets to ensure they conform to these new guidelines, when the private sector is willing to achieve the same goals voluntarily, with little or no expense to the FDA?

Answer. Although FDA has long encouraged the voluntary dissemination of patient information by the private sector, research has demonstrated that many patients currently are not receiving adequate written information on how to use their prescribed medication. The private sector has long stated that it can achieve the goal of dissemination of useful patient information, but advances toward the goal have been clearly linked to external pressures. Thus, although the private sector may be willing to achieve the stated goal, its continued failure to do so necessitates the enactment of additional incentives and safeguards to ensure that distribution rates and information quality do not stagnate at or decrease below current levels. Thus, FDA believes that establishing a clear objective, achievable and focused goals, and a definite time frame, will encourage voluntary compliance with the proposed regulations. If FDA took no action, the current state of varying quality levels of patient information would be maintained with no change in consumer benefit. FDA does not believe that regulatory review of the private sector-created patient information will produce any significant additional burden on agency resources.

Question. Many of the groups that oppose this regulation claim that this regulation forces a "one-size-fits-all" approach on the information that is provided to consumers about prescription medications. I am told that there are systems being developed which would allow this information to be tailored for individual consumers. Would you agree that it is often necessary to tailor the information for a particular individual?

Answer. Yes. Different patients may have different needs, therefore the proposal does not impose a "one size fits all" regulation. FDA believes that the dissemination of basic medication information prepared specifically for patients will serve the purposes of supplementing and reinforcing oral instructions from health care professionals and will not take the place of such patient-professional interaction.

Nor will medication leaflets interfere with or "hamstring" health care providers from using additional patient management strategies or programs. FDA's proposed regulations specified general standards, such as understandable language, and not the specific content or wording of these leaflets. The dispensing of medication information leaflets with new prescriptions is meant to provide the minimum level of information that FDA believes all patients should receive with their prescriptions. FDA encourages professionals to personalize and expand on this information. Further, if the prescriber or dispenser believes that the information included in a leaflet would not be constructive for a particular patient, the leaflet may be withheld. Only if the patient specifically requests the information, will the patient receive the leaflet.

Question. I am told that this regulation would kill the efforts underway to develop these new systems. How will this benefit consumers?

Answer. The proposal specifies that the program would be implemented by the Agency in close cooperation with health care professionals and consumer organizations, and would in fact expand and improve the existing systems, not kill them. FDA has long encouraged the voluntary dissemination of patient information by the private sector. Research has demonstrated, however, that many patients may not be receiving adequate written information on how to use their prescribed medication. Since experience shows that advances toward the goal of dissemination of useful patient information have been clearly linked to external pressures, the current state of varying quality levels of patient information would be maintained with no change in consumer benefit if FDA were to take no action.

BLOOD AND BLOOD PRODUCT SAFETY

Question. Dr. Kessler, last year I sent you a letter regarding the importance of maintaining the surveillance program for identifying transmission of viruses such as HIV and hepatitis to the hemophilia population through blood and blood products. This program is of great importance to this group, who unfortunately have become the early warning system for the safety of the blood supply. It is my understanding that plans are underway to transfer this program from the FDA to the Centers for Disease Control (CDC). I also understand that since I wrote you last year, numerous blood product recalls have occurred. With the transfer of this program to CDC, what are FDA's plans with regard to developing how it will respond to and cooperate with CDC when CDC reports that a transmission of infectious disease occurs?

Answer. The Institute of Medicine recommended that the Public Health Service establish a surveillance system, lodged within the CDC to detect, monitor, and warn of adverse effects in recipients of blood and blood products. The Health and Human Services Task Force on Blood Safety agreed that surveillance is vital. The Public Health Service now has a comprehensive surveillance system, and refinements are continuing.

The CDC has always had the responsibility for surveillance of reportable infectious disease as a public health concern. The collaborative surveillance project of FDA, CDC and the National Hemophilia Foundation, which FDA funded, will

be continued under CDC funding. FDA also will continue to collaborate closely with CDC to investigate product safety issues revealed by surveillance. An example of this cooperation is the recent recall of Alpha Factor VIII and Factor IX lots following discovery of hepatitis A transmission.

Question. Even with the transfer of the surveillance of our nation's blood and blood products to CDC, the FDA remains the focal point for the federal government's role of ensuring adequate blood product recall and withdrawal and prompt patient notification. Last year, in a report entitled "HIV and the Blood Supply," the Institute of Medicine expressed several concerns regarding FDA's previous actions to protect consumers and made specific recommendations to ensure a safe blood supply and inform patients and users of blood and blood products in an expeditious manner when problems occur. What are FDA's current procedures in dealing with adverse incidents in blood products when they occur? Do these standards for biological product differ from standards for other pharmaceutical products or medical devices?

Answer. Under 21 CFR 600.80, licensed manufacturers of biological products, including blood derivatives, are required to report adverse experience information to FDA. Manufacturers are required to report serious and unexpected adverse experiences within 15 working days of initial receipt of the information. They are required to report other adverse experiences at periodic intervals. In addition, manufacturers are required to investigate reports of adverse experiences. For more information on this regulation, please see 59 Federal Register 54036, Adverse Experience Reporting Requirements for Licensed Biological Products; Final Rule. For whole blood and blood components, manufacturers are not subject to the adverse experience reporting requirements in 21 600.80, but they are required to investigate such reports under 21 CFR 606.170(a). Blood and blood component manufacturers are required to report deaths under 21 CFR 606.170(b).

Question. What actions is FDA taking to implement each of the Institute of Medicine's recommendations on recall and withdrawal and product notification?

Answer. There are no explicit references to withdrawal, recall and product notification in the Institute of Medicine recommendations. Comments which relate to product surveillance, an essential part of withdrawal, recall and notification issues, are found in several of the Institute of Medicine recommendations. An example of such a recommendation is "The PHS should establish a surveillance system, lodged in the CDC, that will detect, monitor and warn of adverse effects in recipients of blood and blood products".

This recommendation, and other comments regarding product surveillance issues, was addressed in the testimony by Secretary Shalala to the House Committee on Government Reform and Oversight, Subcommittee on Human Resources and Intergovernmental Relations, on October 12, 1995. Secretary Shalala said in her testimony, "CDC will maintain its internal working group on blood safety. This group coordinates blood safety issues and evaluates any new or potential threats to

the blood supply". CDC will now have a permanent seat on the FDA Blood Products Advisory Committee.

FDA is aware that consumer organizations are seeking an improvement in the dissemination of withdrawal and recall notifications. FDA has brought this issue for public discussion in the March 1996 Blood Products Advisory Committee meeting, and is cooperating with other PHS agencies to develop potential options.

Question. I understand the hemophilia community is very concerned that FDA relies on an informal system for blood product recalls and withdrawals and manufacturers voluntary submission of information necessary for FDA action. They feel this informal means of communication between the FDA and manufacturers, and between manufacturers and their distributors is inconsistent, resulting in long delays in action, and often ignoring the need of the patient to have access to this information in making critical decisions regarding product use. What assurances does a patient have that FDA will react swiftly in examining reports of adverse incidents and that they will be notified in a time sensitive manner about product recalls or withdrawals?

Answer. FDA maintains a Division of Biostatistics and Epidemiology in the Center for Biologics Evaluation and Research which has a primary responsibility for responding to reports of adverse reactions involving biologic products. Such reports and any recognized trends are then brought to the attention of divisions with product responsibility. Reports based on errors and accidents involving manufacturing are handled initially by the Center's Office of Compliance, and likewise referred for medical/scientific evaluation. FDA utilizes all possible means to investigate potentially significant reports.

In order for FDA to initiate or approve withdrawals and recalls, there must be reliable surveillance of appropriate patient populations in order to generate necessary data. Passive data, such as that obtained by submission of adverse reaction reports from physicians, patients, and industry, are a partial solution. Active surveillance, in which selected populations are specifically studied for signs of disease, provides a much more sensitive system. In the case of the hemophilia community, FDA has sponsored a serosurveillance project for the past several years. This project is presently designed to survey the hemophilia population for cases of seroconversion to the test for anti-hepatitis C antibody. The project is conducted by the National Hemophilia Foundation (NHF), and cooperation of participating clinical centers and on the information network established by the NHF. FDA has taken a leadership role in providing criteria for interpretation of test results and in following up on data received.

Recently, FDA received information on possible transmission of hepatitis A by certain lots of Factor VIII and Factor IX from one manufacturer. In these cases, FDA obtained the assistance of the CDC in collecting epidemiologic data on the cases and in performing sophisticated laboratory studies to confirm that the implicated material was causative in the transmission. Since these were isolated cases, and the disease involved is clinically quite mild, this data collection was difficult and required time. The manufacturer agreed to place the implicated lot of material on hold until studies were completed. As soon as FDA had data that clearly

established a causal link between the Factor VIII and disease transmission, the implicated product lots were withdrawn.

There is room for improvement. CDC has received the mandate and the resources to expand surveillance activity in this area. A system is being put in place that will utilize the federally funded comprehensive care clinics, which serve approximately 70 percent of patients with hemophilia. FDA will work with CDC on this system and will benefit from the data that derive from it. The system will require cooperation of patients, care givers and all who are involved with the hemophilia community.

Question. What steps have been taken to move forward on a task force on improving patient notification for users of blood and blood products, as suggested by the National Hemophilia Foundation?

Answer. FDA has discussed this issue extensively with members of the hemophilia community and the question was presented at the March 22, 1996 meeting of the Blood Product Advisory Committee. There are many unresolved questions, such as, who needs to be notified; consignees, care givers, institutions, patients; who is responsible for notifying these various groups; and, how will notification be conducted.

These questions raise scientific, administrative, economic, legal, and ethical issues. FDA is in the process of collecting input from involved parties and using this input to work with the parties to structure a notification system. Members of the hemophilia community, the industry, and involved government agencies have been asked to participate in planning sessions in the very near future. In the interim, FDA has employed various methods to notify the public of information on products. In the case of a class I recall, for example, these include use of press releases and media instruments, as well as by "Dear Doctor" letters and notices in the FDA Drug Bulletin. FDA will proceed with its planning activity and will report to the Blood Products Advisory Committee on progress.

Question. What criteria does the Center for Biologics Evaluation and Research utilize to determine reportable adverse events in blood products?

Answer. Manufacturers of blood products, such as blood derivatives, are subject to adverse experience reporting as set forth in 21CFR 600.80. The regulations specify the criteria for reporting adverse experiences, including the frequency of reporting and the necessary information to be reported. For example, under 21 CFR 600.80(c)(2), periodic reports must contain a narrative summary and analysis of the information in the report and a history of actions taken since the last report because of adverse experiences. Under 21 CFR 600.80(a), blood components, defined under 606.3 as "that part of a single-donor unit of blood separated by physical or mechanical means," are exempted from reporting under adverse events. Under 606.170, records of any reports of complaints of adverse reactions regarding each unit of blood or blood product from blood collection to transfusion must be maintained and investigated. Such records are reviewed on inspections. When a complication confirmed to be fatal is determined, a report must be made to the

Agency as soon as possible and a written report of the investigation within seven days. FDA intends to propose revisions to 606.170, concerning reports related to blood collection or transfusion.

Question. How frequently are manufacturers audited for adverse events?

Answer. Under 21 CFR 600.80(a), blood components as defined under 606.3 are exempted from reporting under adverse events. Blood component as defined means, "that part of a single-donor unit of blood separated by physical or mechanical means." Under 606.170, records of any reports of complaints of adverse reactions regarding each unit of blood or blood product from blood collection to transfusion must be maintained and investigated. Such records are reviewed on inspections. FDA routinely inspects the manufacturers at least biennially and reviews adverse event reports.

Question. Is adverse event reporting mandatory?

Answer. Adverse event reporting is mandatory for blood derivatives under 21 CFR 600.80. When a complication confirmed to be fatal is determined, a report must be made to the Agency as soon as possible and a written report of the investigation within seven days. FDA intends to propose revisions to 606.170, concerning reports related to blood collection or transfusion. Under 21 CFR 600.80(a), blood components as defined under 606.3 are exempted from reporting under adverse events. Blood component as defined means, "that part of a single-donor unit of blood separated by physical or mechanical means." Under 606.170, records of any reports of complaints of adverse reactions regarding each unit of blood or blood product from blood collection to transfusion must be maintained and investigated. Such records are then reviewed on inspections.

Question. Are the following terms listed in FDA guidelines uniformly applied to products regulated by FDA: quarantines, recalls, and voluntary market withdrawal? If not, why not?

Answer. The terms "recall" and "market withdrawal" are found in FDA recall guidelines and definitions and are used to describe actions taken by firms regarding FDA regulated products. Such definitions are used uniformly across the Agency regardless of the type products involved. The term "quarantine", while it has been used to describe actions taken by the regulated industry, is not defined in FDA recall guidelines.

Question. How does the FDA enforce effectiveness checks by the manufacturer for recalled or withdrawn products?

Answer. FDA advises the recalling firm in writing of the classification of the recall and suggests the effectiveness check level that the Agency considers appropriate for the particular recall circumstances. The recalling firm is requested

to provide FDA with status reports on the recall's progress. This includes the results of its effectiveness checks. The vast majority of recalls and all market withdrawals are voluntary actions taken on the part of manufacturers or distributors to carry out their responsibility to protect the public health and well-being from products that present a risk of injury or gross deception or are otherwise defective.

Question. What are the FDA standard operating procedures for carrying out the regulations regarding notification of distributors (CFR 7.49) and the public (CFR 7.50) in the event of product withdrawals and recalls? Are these uniformly enforced?

Answer. CFR 7.49, Recall Communication, provides guidance to the industry in the appropriate ways to prepare and disseminate recall communications to its consignees. Normally, the manner in which a recall communication is issued is at the recalling firm's discretion. FDA does advise recalling firms to provide its consignees with written verification of any verbal or in-person action taken. This is usually hard copy delivered by a mail service, but could be done via an electronic message to the consignee.

CFR 7.50, Public Notification of Recall, refers to FDA's responsibility to provide information to the public about recall actions. FDA has a weekly publication, the FDA Enforcement Report, which provides a descriptive listing of all recall actions which FDA has classified as recalls during the previous week. CFR 7.50 states that the report will not include a firm's product removal or correction which the agency determines to meet the definition of market withdrawal. Therefore, there is no public notice of market withdrawals. Further, a firm's removal or correction of a distributed product which involves a minor violation for which FDA would not initiate legal action, or which involves no violation.'

Additionally, when a recall situation arises which FDA considers to be class I, consideration is given to the necessity of issuing a press release to the general public. Such a press release may be issued by FDA or may be issued by the recalling company, usually with FDA review prior to its release. These procedures are uniformly followed by FDA headquarters and field offices, and generally followed voluntarily by recalling firms.

Question. Do FDA's standard operating procedures differ for biological products when compared to other pharmaceutical products and devices?

Answer. No. The guidelines provided in CFR Part 7, Subpart C on recalls, and the guidance provided in FDA's Regulatory Procedures Manual, Chapter 7, are applicable to biologicals, pharmaceuticals and medical devices. FDA has separate procedures for recalls, or corrective action programs for radiation emitting medical devices and electronic products.

Question. What process does FDA use to assess the health hazard of the product being withdrawn or recalled (IE. Class I, II, III; CFR 7.41)? What criteria are used to make these decisions? Does FDA seek input from care givers and patients?

Answer. Each FDA Center has a recall staff involved in the classification of recalls of products under that center's responsibility. Each Center has a cadre of professionals who are called upon as needed to assess the health hazards involved with recalled products. The Regulatory Procedures Manual Chapter 7, gives guidance, in the health hazard evaluation process. Further, Attachment E to Chapter 7 provides additional guidance to be used in preparing health hazard evaluations. Attachment E covers each of the factors listed in CFR 7.41 and provides questions and concerns to be considered under each of the factors.

FDA does not normally seek input from care givers and patients in conducting its health hazard evaluations. There are reporting systems in place which provide opportunity for individuals, such as patients or care givers, product users, physicians, clinics, and hospitals, to report any problem to FDA. Receipt of reports of defective or violative products are the impetus of FDA investigations and subsequent recall actions by industry. However, FDA's health hazard evaluations are generally conducted using data available and the expertise of the FDA staff to come to a conclusion.

Question. When the FDA issues memoranda, recommendations and guidelines regarding blood products, what is the distribution network to disseminate this information? What is the policy on distribution of these documents?

Answer. Distribution of Agency memoranda, recommendations and guidelines regarding blood products is targeted to all registered and licensed blood establishments and all affected manufacturers of products by direct mailings. In addition, distribution of such documents are made publicly available through mechanisms such as electronic media and the Federal Register.

RADIOPHARMACEUTICAL NEW DRUG APPLICATION APPROVALS

Question. It is my understanding that the user fee program for new drug approvals has improved new drug application (NDA) approvals for certain types of drug classes. However, it is my understanding that the NDA approval for radiopharmaceutical have gotten worse. I am informed that current approvals for other drug classes average 19 months, while those for radiopharmaceutical average 37 months. I also understand that the volume of material submitted for a radiopharmaceutical NDA (17-57 volumes) averages only a fraction of the material submitted for other drugs (265-800 volumes). Why is the approval time for radiopharmaceutical so much longer than for other drugs?

Answer. At the time of enactment of the Prescription Drug User Fee Act (PDUFA), the Division that handles these applications had one of the largest human drug backlogs. However, we have recently eliminated the backlog. There are no original new drug applications, resubmissions or efficacy supplements from either the pre-PDUFA or PDUFA cohorts that are overdue. This achievement is due to the extraordinary efforts of our review staff to not only clear the backlog, but also to act promptly on new submissions.

Question. What was the average approval time for radiopharmaceutical in 1994 and 1995? Why has this approval time increased, while the average for other drugs has decreased?

Answer. The average approval time for radiopharmaceuticals approved in FY 1994 was 22.2 months, and 31.1 months in FY 1995. In order to get a clear picture of approval times, it is important to distinguish new drug applications submitted before the implementation of the Prescription Drug User Fee Act (PDUFA) of 1992 from those submitted after implementation and which would be included in PDUFA cohorts. We have no examples of PDUFA applications that were approved in FY 1994, so we will consider the average approval times for radiopharmaceuticals that were submitted in the FY cohorts for 1993 and 1995. The average approval time for radiopharmaceuticals submitted in the FY 1993 cohort was 24.9 months, and for those submitted in the FY 1995 cohort, 5.5 months. This dramatic decrease in approval time reflects not only the performance improvements observed across the board with PDUFA, but very significantly the clearance of this particular division's backlog, as described above. I would like to provide, for the record, average and median approval times for radiopharmaceutical NDAs.

[The information follows:]

**Average and Median Approval Times for Radiopharmaceutical NDAs
in the Categories Requested
(Average/Median Time in Months)**

	<u>Average</u>	<u>Median</u>	<u>Count</u>
Radiopharmaceuticals APPROVED in FY94	22.2	19.3	3
Radiopharmaceuticals APPROVED in FY95	31.1	32.6	3
Radiopharmaceuticals APPROVED that were submitted in FY93 (i.e., that were part of the FY93 cohort)	24.9	22.3	7
Radiopharmaceuticals APPROVED that were submitted in FY94 (i.e., that were part of the FY94 cohort)	---	---	0
Radiopharmaceuticals APPROVED that were submitted in FY95 (i.e., that were part of the FY95 cohort)	5.5	5.5	1

NATIONAL PERFORMANCE REVIEW

Question. Dr. Kessler, you indicate in your written statement that FDA last year proposed substantial changes in the way it regulates drugs, medical devices and medications made using biotechnology as part of the Vice President's National

Performance Review. How have these changes altered FDA's resource requirements and where is this reflected in FDA's presentation of the distribution of its requirements for each of fiscal years 1996 and 1997?

Answer. The changes proposed by the National Performance Review for medical products are aimed at making the regulatory process more efficient and customer-friendly. Although we also expect many of the changes to result in significant net savings, these savings primarily accrue to industry, not to FDA.

For example, FDA published a guidance in July 1995 that fulfills one of the commitments made in the National Performance report by reducing the need for manufacturers of biological products to build full-scale manufacturing facilities before final testing of the product. The cost of constructing such a facility has been estimated at \$25 million, with annual operating costs of an additional \$15 million. Under this guidance, manufacturers can often delay these costs by operating out of pilot facilities until the product testing has concluded, or even avoid them completely in instances where the product was not approved. FDA's costs, however, are virtually unchanged since the same number of product applications must still be reviewed. Thus, no savings from the NPR-related changes are reflected in FDA's resource requirements for FYs 1996 and 1997 because the related savings primarily accrue to industry rather than to FDA.

OFFICE OF THE COMMISSIONER AND OTHER FDA OFFICE FUNDING AND STAFFING

Question. The FY 1996 appropriations Act contains a provision prohibiting funds appropriated to the FDA from being used to increase, from the FY 95 level, the level of full-time equivalency positions (whether from new hires or by transferring full-time equivalents from other offices) for any of the following FDA offices: Office of the Commissioner, Office of Policy, Office of External Affairs (Immediate Office, as well as the Office of Health Affairs, Office of Legislative Affairs, Office of Consumer Affairs, and Office of Public Affairs), and the Office of Management Systems (Immediate Office, as well as the Office of Planning and Evaluation and Office of Management). I note that the Office of the Commissioner will maintain its FY 1995 151 full-time equivalent position level in FY 1996 and FY 1997. Why is this Office held harmless from FTE position absorptions? What is the justification for the 151 FTE position level for the Office of the Commissioner?

Answer. The FTE ceiling of 151 is comprised of four separate offices within the Office of the Commissioner. The offices are the immediate Office of the Commissioner, 20 FTE, Office of Chief Counsel, 76 FTE, Office of Advocacy and Oversight, 35 FTE, and Equal Employment Office with 20 FTE. You are correct that the ceiling FTE for these offices as shown in the 1997 Congressional Budget is estimated to be the same in 1996 and 1997. However, each of these offices, though small in numbers, provides some of the critical leadership and expertise needed to secure and manage the entire Agency. FDA has been identifying opportunities for streamlining programs and administrative processes to optimize efficiency. The success of these initiatives has been facilitated by these offices.

The Office of the Chief Counsel provides a full range of legal services to FDA in the enforcement of the Federal Food, Drug and Cosmetic Act, providing legal

advice and policy guidance for all programs administered by FDA. The Office of Equal Employment and Civil Rights advises and assists the Commissioner and other officials on equal employment opportunity and Civil Rights activities which impact on policy development and execution of program goals. The Office of Advocacy and Oversight advises the Commissioner and other agency officials on policy and other agency-level activities and decisions that affect Agency wide programs, projects, strategies, and initiatives including issues that are sensitive and controversial which impact Agency relations with other Federal agencies and foreign governments.

Question. The table on page 48 of the justification presents FTE ceilings. What were the actual funded FTE levels for these FDA offices for FY 1995, the funded FTE positions estimated for FY 1996 and proposed for FY 1997?

Answer. I would be happy to provide that information for the record.
[The information follows:]

	FY 1995 Actual	FY 1996 Estimate	FY 1997 Estimate
Office of the Commissioner:	140	151	151
-- Office of Commissioner.....	(20)	(20)	(20)
-- Office of Chief Counsel.....	(67)	(76)	(76)
-- Office of Advocacy & Oversight....	(32)	(35)	(35)
-- Equal Employment Office.....	(21)	(20)	(20)
Office of Management & Systems	728	624	611
*:	(499)	(495)	(485)
-- Office of Management.....	(44)	(46)	(45)
-- Office of Planning & Evaluation....	(113)	(---)	(---)
-- Parklawn Computer Center.....			
Office of External Affairs:	193	201	197
-- Office of Health Affairs.....	(38)	(37)	(36)
-- Office of Consumer Affairs.....	(22)	(27)	(26)
-- Office of Public Affairs.....	(70)	(69)	(68)
-- Office of Legislative Affairs.....	(32)	(33)	(33)
-- Office of Women's Health	(1)	(7)	(7)
Office of Policy:	35	38	37
Total, Non-Center/Oper. FTEs	1,096	1,014	996

* The Office of Management & Systems reflects the transfer of 120 Parklawn Computer Center (PCC) FTEs to the Program Support Center in FYs 1996 & 1997.

Question. The column labeled "FY 1996 Ceiling FTEs" carries a footnote that it "reflects the transfer of 120 FTEs associated with the Parklawn Computer Center (PCC) to the OS." Please explain this. Where are those 120 FTE in the FY 1995 column? What is the "OS"?

Answer. Until FY 1996, FDA funded 120 FTEs for the Parklawn Computer Center. In FY 1996, the Program Support Center (PSC) was created by the Office of the Secretary (OS), as a separate operating division within DHHS. FDA transferred 120 FTEs to PSC at the beginning of FY 1996. In FY 1995, FDA housed the 120 PCC FTEs within the Office of Management and Systems. The FY 1996 and FY 1997 FTE ceiling for the Office of Management and Systems have been reduced to reflect the transfer.

Question. It is difficult to determine from FDA's budget justification from which FDA activities the funding and staff years for the Office of the Commissioner and other FDA offices listed on page 48 is taken. Please submit a revised FDA distribution of resources table (the one on pages 36-37 of the budget justification) which includes the Office of the Commissioner and other FDA offices listed on page 48 of the justification. Show the funding and FTE levels for these activities by FDA activity, for each of fiscal years 1995 and 1996, and proposed for FY 1997.

Answer. The table on page 48 of FDA's budget justification provides operating dollars and FTEs for the Office of the Commissioner, Office of Management and Systems, Office of External Affairs and the Office of Policy. These four offices are the portion of the organization chart on page 3 of the budget justification that excludes the Office of Operations. Though not included in the operations organization, of these four offices, both the Office of the Commissioner and the Office of Policy have a direct operational role in the mission of the FDA. The immediate Office of the Commissioner provides the necessary leadership and guidance in the overall operations and policy development of the FDA mission. The Office of Policy directs and coordinates the Agency's rulemaking activities and regulations development system. These functions are as critical to the fulfillment of FDA's core missions as those in the Office of Operations.

The operations organizations -- the Office of the Commissioner, Office of Policy, Centers, and Field staff -- cannot perform the vital mission of administering the regulation of biological products, drug products, foods and cosmetics, medical devices, and animal drugs without substantial support. The balance of the offices on the organizational chart -- the Office of External Affairs, Office of Management and Systems, and remaining segments of the Office of the Commissioner -- are the organizations within FDA that provide this vital support.

This principal support role cuts across all agency programs, and includes vital functions, both statutory and non-statutory, such as the Office of the Chief Counsel, Advocacy and Oversight, Consumer Affairs, Public Affairs, Equal Employment, Administrative Law Judge, Planning, as well as personnel management, resource management, facilities management, and automated systems support.

Funding for these direct operational and support operations is provided by the programs supported and is provided in proportion to the FTEs expended on behalf of the individual program. Although FDA cannot draw a direct relationship for each individual office and each program, the resources are allocated to these offices from the other FDA programs on a fair share basis. Exceptions are certain direct operating costs that are paid for from centrally managed accounts that support only one program, such as the NIH management fund support to the Biologics program. These costs are charged directly to the benefitting program, in addition to a fair share of other costs.

I would like to provide, for the record, a chart showing an estimate of how the resources might be distributed to the specific offices on page 48 of the budget justification.

[The information follows:]

**FOOD AND DRUG ADMINISTRATION
ESTIMATED DISTRIBUTION OF RESOURCES**

TOTAL, SPECIFIC OFFICES - Current Law

	FY 1995 Actual		FY 1996 Appropriation		FY 1997 Estimate	
FOOD SAFETY & COSMETICS:						
Chemical Safety of Foods.....	\$967	82	\$900	74	\$900	73
Microbiological Safety of Foods.....	1,296	109	1,208	99	1,208	98
Nutrient Quality and Food Labeling.....	370	32	345	29	345	28
Cosmetics Safety and Labeling.....	81	7	74	6	74	6
Total, Food Safety and Cosmetics	2,714	230	2,527	208	2,527	205
HUMAN DRUGS:						
Bioresearch Monitoring.....	221	18	197	16	197	16
Generic Drug Evaluation.....	442	36	394	32	394	32
Prescription Drug Advertising & Labeling.....	41	4	37	3	37	3
New Drug Evaluation.....	1,230	100	1,097	90	1,097	89
Drug Quality Assurance.....	650	53	579	48	579	47
Over-the-Counter Drug Evaluation.....	124	10	111	10	111	10
Postmarketing Surveillance & Epidemiology.....	83	7	74	6	74	6
Health Fraud.....	27	3	25	2	25	2
Total, Human Drugs	2,818	231	2,514	207	2,514	205
BIOLOGICS:						
Vaccines and Allergens.....	389	32	347	29	347	28
Blood and Blood Products.....	541	44	482	40	482	39
Therapeutics.....	295	25	273	22	273	23
Total, Biologics	1,225	101	1,102	91	1,102	90
ANIMAL DRUGS & FEEDS:						
Pre-Approval Evaluation.....	254	21	225	18	225	19
Post-Approval Evaluation.....	297	24	262	22	262	22
Total, Animal Drugs and Feeds	551	45	487	40	487	41
TOTAL, DRUGS	4,594	377	4,103	337	4,103	336
MEDICAL & RADIOLOGICAL DEVICES:						
Surveillance & Enforcement.....	897	81	861	71	861	70
Product Evaluation.....	640	54	591	49	591	48
Risk Assessment.....	227	20	209	17	209	16
Education & Assistance.....	106	9	98	8	98	8
Total, Medical & Radiological Devices	1,870	164	1,760	145	1,760	142
NCTR:						
Integrated Research.....	95	7	83	7	83	7
Methods Development.....	78	5	67	5	67	5
Total, NCTR	173	12	150	12	150	12
PROGRAM MANAGEMENT:						
Program Management 1/.....	3,957	313	3,616	311	3,616	301
Total, Program Management	3,957	313	3,616	311	3,616	301
TOTAL, SALARIES & EXPENSES	\$13,308	1,096	\$12,155	1,014	\$12,155	996

1/ Does not include the field support portion of Program Management which is provided by the Office of Operations/ORA (40 FTE and related operating funding).

Question. Please provide a ten-year funding and staffing history for each of the offices on the FDA organization chart on page 3 of the justification. For each of fiscal years 1986 through 1996, and proposed for fiscal year 1997 (excluding collections from new unauthorized user fees proposals), provide the level of funding and number of funded FTE positions for each of the following: Office of the Commissioner (provide funding and FTE position level associated with the Commissioner, the Executive Assistant to the Commissioner; and the Senior Advisor for Science); Office of Chief Counsel; Office of Advocacy and Oversight (provide funding and FTE position level of Deputy Commissioner, the Chief Mediator and Ombudsman, Office of Internal Affairs, Office of Executive Secretariat, and Special Assistant for Investigations); Office of the Administrative Law Judge; Office of Equal Employment and Civil Rights; Office of Management and Systems (provide funding and FTE position level of the Deputy Commissioner, Office of Management, Office of Information Resources Management, and Office of Planning and Evaluation); Office of Policy (provide funding and FTE position level of Deputy Commissioner, Regulations Policy and Management Staff, Policy Development and Coordination Staff, Policy Research Staff, and International Policy Staff); Office of External Affairs (provide funding and FTE position level of Deputy Commissioner, Office of Public Affairs, Office of Health Affairs, Office of Legislative Affairs, Office of Consumer Affairs, Office of Aids and Special Health Issues, and Office of Women's Health). and the Office of Operations (provide funding and FTE position level of Deputy Commissioner, Office of Regulatory Affairs, Center for Devices and Radiological Health, the Center for Biologics Evaluation and Research, National Center for Toxicological Research, Office of Science, Center for Drug Evaluation and Research, the Center for Food Safety and Applied Nutrition, Center for Veterinary Medicine, and the Office of Orphan Products Development).

Answer. I would be happy to provide the requested information for the record.

[The information follows:]

Ten-Year Funding History — Food and Drug Administration
Summary
(\$ in 000's)

Fiscal Year	Operating Budget	Payroll & Benefits	Centrally Funded Accounts 1/	Total, FDA
FY 1986 Actual.....	\$76,858	\$268,948	\$31,602	\$377,408
FY 1987 Actual.....	\$107,779	\$279,836	\$35,139	\$422,754
FY 1988 Actual.....	\$111,723	\$300,945	\$37,836	\$450,504
FY 1989 Actual.....	\$121,551	\$323,650	\$42,143	\$487,344
FY 1990 Actual.....	\$155,727	\$358,729	\$50,648	\$565,104
FY 1991 Actual.....	\$184,419	\$408,848	\$61,243	\$654,510
FY 1992 Actual.....	\$187,584	\$466,993	\$71,385	\$725,962
FY 1993 Actual.....	\$183,187	\$499,433	\$74,910	\$757,530
FY 1994 Actual.....	\$231,375	\$544,860	\$77,055	\$853,290
FY 1995 Actual.....	\$241,909	\$571,082	\$78,754	\$891,745
FY 1996 Estimate.....	\$213,017	\$616,714	\$87,640	\$917,371
FY 1997 Request.....	\$196,505	\$630,117	\$98,081	\$924,703

1/ Includes those rent accounts paid by FDA out of the S&E appropriation as well as the centrally managed telecommunication, maintenance, service and supply, NIH management fund and other accounts.

TEN-YEAR FUNDING AND STAFFING HISTORY FOR THE FDA OFFICES
(\$ in 000's)

OFFICES	1986		1987		1988	
	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING
Office of the Commissioner (OC):						
Office of the Commissioner/Immediate Office (OC/IO):						
-- Immediate Office	\$286	13	\$409	12	\$508	12
-- Executive Assistant to the Commissioner (EAC) 1/						
-- Senior Advisor for Science (SAS) 2/						
-- Office of the Administrative Law Judge (OAL)	\$18	2	\$18	2	\$18	2
Subtotal, OC/IO	\$304	15	\$427	14	\$526	14
Office of Equal Employment and Civil Rights (EEO)	\$154	16	\$303	14	\$187	13
Subtotal, EEO	\$154	16	\$303	14	\$187	13
Office of Chief Counsel (OCC)						
Subtotal, OCC	\$0	0	\$0	0	\$0	0
Office of Advocacy and Oversight (OAO):						
-- Office of Advocacy & Oversight Immediate Office (IO)						
-- Chief Mediator and Ombudsman (CMO)						
-- Office of Internal Affairs (OIA) 3/						
-- Office of Executive Secretariat (OES)	\$86	19	\$291	19	\$98	20
-- Special Assistant for Investigations (SAI) 4/						
Subtotal, OAO	\$86	19	\$291	19	\$98	20
Total, OC	\$544	50	\$1,021	47	\$811	47
Office of Management & Systems (OMS):						
Office of Management & Systems/Immediate Office (IO)						
Office of Information Resources Management (OIRM)	\$322	12	\$495	16	\$449	23
Office of Planning and Evaluation (OPE)	\$209	42	\$226	40	\$323	40
Office of Management (OM)	\$3,170	414	\$3,472	400	\$3,707	399
Subtotal, OMS	\$3,701	468	\$4,193	456	\$4,479	462
Office of Policy (OP):						
Office of Policy/Immediate Office (OP/IO) 6/						
Regulations Policy and Management Staff (RPMS)						
Policy Development and Coordination Staff (PDCS)						
Policy Research Staff (PRS)						
International Policy Staff (IPS)						
Subtotal, OP	\$0	0	\$0	0	\$0	0
Office of External Affairs (OEA):						
Office of External Affairs (OEA)/IO						
Office of Public Affairs (OPA)	\$1,240	56	\$1,270	53	\$1,462	53
Office of Health Affairs (OHA)	\$244	47	\$194	33	\$198	33
Office of Legislative Affairs (OLA)	\$77	33	\$116	33	\$141	33
Office of Consumer Affairs (OCA)	\$228	25	\$301	24	\$270	24
Office of AIDS and Special Health Issues (OASHI)						
Office of Women's Health (OWH)						
Subtotal, OEA	\$1,789	161	\$1,881	143	\$2,071	143
Office of Operations (OO):						
Office of Operations (OO)/IO						
Office of Regulatory Affairs (ORA)	\$18,373	2,709	\$26,024	2,658	\$26,833	2,681
Center for Devices and Radiological Health (CDRH)	\$7,216	766	\$10,907	766	\$11,810	778
Center for Biologicals Evaluation and Research (CBER) 7/					\$19,555	408
Center for Drug Evaluation and Research (CDER) 8/	\$15,275	1,419	\$27,018	1,467	\$12,589	1,119
National Center for Toxicology Research (NCTR)	\$11,157	281	\$14,507	240	\$13,972	240
Office of Science (OS) 9/						
Center for Food Safety and Applied Nutrition (CFSAN)	\$13,748	820	\$14,808	809	\$11,559	809
Center for Veterinary Medicine (CVM)	\$2,133	247	\$3,338	244	\$3,321	244
Office of Orphan Products Development (OOPD)	\$2,922	8	\$4,082	7	\$4,723	7
Subtotal, OO	\$70,824	6,250	\$100,694	6,191	\$104,362	6,286
GRAND TOTAL, FDA	\$76,858	6,929	\$107,779	6,837	\$111,723	6,938

TEN-YEAR FUNDING AND STAFFING HISTORY FOR THE FDA OFFICES
(\$ in 000's)

OFFICES	1989		1990		1991	
	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING
Office of the Commissioner (OC):						
Office of the Commissioner/Immediate Office (OC/IO):						
-- Immediate Office	\$429	12	\$384	18	\$1,502	18
-- Executive Assistant to the Commissioner (EAC) 1/						
-- Senior Advisor for Science (SAS) 2/						
-- Office of the Administrative Law Judge (OAL)	\$23	2	\$23	2	\$24	2
Subtotal, OC/IO	\$452	14	\$407	20	\$1,526	20
Office of Equal Employment and Civil Rights (EEO)	\$197	13	\$281	20	\$219	20
Subtotal, EEO	\$197	13	\$281	20	\$219	20
Office of Chief Counsel (OCC)						
Subtotal, OCC	\$0	0	\$0	0	\$0	0
Office of Advocacy and Oversight (OAO):						
-- Office of Advocacy & Oversight Immediate Office (IO)						
-- Chief Mediator and Ombudsman (CMO)					n/a	5
-- Office of Internal Affairs (OIA) 3/						
-- Office of Executive Secretariat (OES)	\$143	20	\$200	34	\$200	33
-- Special Assistant for Investigations (SAI) 4/						
Subtotal, OAO	\$143	20	\$200	34	\$200	38
Total, OC	\$792	47	\$888	74	\$1,945	78
Office of Management & Systems (OMS):						
Office of Management & Systems/Immediate Office (IO)						
Office of Information Resources Management (OIRM)	\$579	23	\$1,150	30	\$1,083	30
Office of Planning and Evaluation (OPE)	\$645	40	\$476	46	\$381	46
Office of Management (OM)	\$3,955	410	\$5,866	457	\$6,763	501
Subtotal, OMS	\$5,179	475	\$7,492	533	\$8,227	577
Office of Policy (OP):						
Office of Policy/Immediate Office (OP/IO) 6/						
Regulations Policy and Management Staff (RPMS)						
Policy Development and Coordination Staff (PDCS)						
Policy Research Staff (PRS)						
International Policy Staff (IPS)						
Subtotal, OP	\$0	0	\$0	0	\$0	0
Office of External Affairs (OEA):						
Office of External Affairs (OEA)/IO						
Office of Public Affairs (OPA)	\$1,546	53	\$1,650	70	\$1,824	70
Office of Health Affairs (OHA)	\$345	35	\$347	39	\$1,012	39
Office of Legislative Affairs (OLA)	\$212	33	\$160	36	\$146	36
Office of Consumer Affairs (OCA)	\$402	24	\$544	33	\$493	34
Office of AIDS and Special Health Issues (OASHI)					\$137	7
Office of Women's Health (OWH)						
Subtotal, OEA	\$2,505	145	\$2,701	178	\$3,612	186
Office of Operations (OO):						
Office of Operations (OO)/IO						
Office of Regulatory Affairs (ORA)	\$26,471	2,776	\$40,123	2,990	\$50,225	3,230
Center for Devices and Radiological Health (CDRH)	\$11,748	800	\$12,946	858	\$13,943	938
Center for Biologics Evaluation and Research (CBER) 7/	\$21,314	480	\$24,174	531	\$26,313	561
Center for Drug Evaluation and Research (CDER) 8/	\$14,307	1,168	\$20,225	1,237	\$26,592	1,368
National Center for Toxicology Research (NCTR)	\$14,158	239	\$16,482	245	\$17,803	245
Office of Science (OS) 9/						
Center for Food Safety and Applied Nutrition (CFSAN)	\$16,378	820	\$18,190	821	\$22,009	884
Center for Veterinary Medicine (CVM)	\$3,103	251	\$4,784	277	\$4,644	282
Office of Orphan Products Development (OOPD)	\$5,596	7	\$7,722	15	\$9,106	18
Subtotal, OO	\$113,075	6,541	\$144,646	6,974	\$170,435	7,526
GRAND TOTAL, FDA	\$121,551	7,308	\$155,727	7,759	\$184,419	8,367

TEN-YEAR FUNDING AND STAFFING HISTORY FOR THE FDA OFFICES
(\$ in 000's)

OFFICES	1992		1993		1994	
	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING
Office of the Commissioner (OC):						
Office of the Commissioner/Immediate Office (OC/IO):						
-- Immediate Office	\$460	20	\$445	9	\$616	24
-- Executive Assistant to the Commissioner (EAC) 1/						
-- Senior Advisor for Science (SAS) 2/						
-- Office of the Administrative Law Judge (OAL)	\$25	2	\$24	2	\$23	2
Subtotal, OC/IO	\$485	22	\$469	11	\$639	26
Office of Equal Employment and Civil Rights (EEO)	\$271	20	\$209	22	\$267	21
Subtotal, EEO	\$271	20	\$209	22	\$267	21
Office of Chief Counsel (OCC)						
Subtotal, OCC	\$0	0	\$0	0	\$0	0
Office of Advocacy and Oversight (OAO):						
-- Office of Advocacy & Oversight Immediate Office (IO)						
-- Chief Mediator and Ombudsman (CMO)	n/a	5	n/a	5	n/a	6
-- Office of Internal Affairs (OIA) 3/					\$327	0
-- Office of Executive Secretariat (OES)	\$173	23	\$172	23	\$179	22
-- Special Assistant for Investigations (SAI) 4/	\$36	4	\$40	6	\$57	7
Subtotal, OAO	\$209	32	\$212	34	\$563	35
Total, OC	\$665	74	\$680	67	\$1,469	82
Office of Management & Systems (OMS):						
Office of Management & Systems/Immediate Office (IO)	\$1,271	5	\$1,624	10	\$9,057	26
Office of Information Resources Management (OIRM)	\$1,206	35	\$1,005	35	\$1,455	35
Office of Planning and Evaluation (OPE)	\$687	46	\$324	46	\$604	48
Office of Management (OM)	\$7,757	522	\$6,806	522	\$7,463	520
Subtotal, OMS	\$10,921	608	\$9,759	613	\$18,579	629
Office of Policy (OP):						
Office of Policy/Immediate Office (OP/IO) 6/	\$93	n/a	\$118	9	\$248	38
Regulations Policy and Management Staff (RPMs)	\$199	n/a	\$60	20		
Policy Development and Coordination Staff (PDCS)	\$36	n/a	\$26	3		
Policy Research Staff (PRS)	\$15	n/a	\$12	3		
International Policy Staff (IPS)						
Subtotal, OP	\$343	33	\$216	35	\$248	38
Office of External Affairs (OEA):						
Office of External Affairs (OEA/IO)	\$392	8	\$120	12	\$241	9
Office of Public Affairs (OPA)	\$2,079	72	\$2,107	71	\$1,745	70
Office of Health Affairs (OHA)	\$474	41	\$422	41	\$677	43
Office of Legislative Affairs (OLA)	\$179	36	\$118	36	\$150	36
Office of Consumer Affairs (OCA)	\$534	34	\$316	34	\$262	32
Office of AIDS and Special Health Issues (OASHI)	\$71	8	\$81	8	\$348	12
Office of Women's Health (OWH)						
Subtotal, OEA	\$3,729	199	\$3,164	202	\$3,423	202
Office of Operations (OO):						
Office of Operations (OO)/IO	\$94	3	\$129	5	\$76	4
Office of Regulatory Affairs (ORA)	\$50,447	3,381	\$45,528	3,431	\$55,809	3,479
Center for Devices and Radiological Health (CDRH)	\$12,514	939	\$14,592	952	\$17,965	1,044
Center for Biologics Evaluation and Research (CBER) 7/	\$25,378	683	\$25,125	686	\$40,169	772
Center for Drug Evaluation and Research (CDER) 8/	\$28,907	1,414	\$27,986	1,416	\$36,393	1,485
National Center for Toxicology Research (NCTR)	\$15,894	241	\$22,923	259	\$18,718	257
Office of Science (OS) 9/	\$18	2	\$58	2	\$133	2
Center for Food Safety and Applied Nutrition (CFSAN)	\$24,206	909	\$19,739	915	\$21,775	912
Center for Veterinary Medicine (CVM)	\$4,759	284	\$3,705	286	\$4,105	284
Office of Orphan Products Development (OOPD)	\$9,409	18	\$9,373	18	\$12,513	18
Subtotal, OO	\$171,426	7,874	\$169,158	7,970	\$207,656	8,257
GRAND TOTAL, FDA	\$187,584	8,788	\$183,187	8,897	\$231,375	9,289

TEN-YEAR FUNDING AND STAFFING HISTORY FOR THE FDA OFFICES
(\$ in 000's)

OFFICES	1992		1993		1997 Request	
	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING	TOTAL FUNDING	FTE CEILING
Office of the Commissioner (OC):						151
Office of the Commissioner/Immediate Office (OC/IO):						
-- Immediate Office	\$1,931	17	\$2,137	18	\$423	n/a
-- Executive Assistant to the Commissioner (EAC) 1/						
-- Senior Advisor for Science (SAS) 2/						
-- Office of the Administrative Law Judge (OAL)	\$23	2	\$19	2	\$14	n/a
Subtotal, OC/IO	\$1,954	19	\$2,156	20	\$437	151
Office of Equal Employment and Civil Rights (EEO)	\$189	20	\$155	20	\$118	n/a
Subtotal, EEO	\$189	20	\$155	20	\$118	0
Office of Chief Counsel (OCC)	\$825	76	\$524	76	\$398	n/a
Subtotal, OCC	\$825	76	\$524	76	\$398	n/a
Office of Advocacy and Oversight (OAO):						
-- Office of Advocacy & Oversight Immediate Office (IO)			\$18	2	\$14	n/a
-- Chief Mediator and Ombudsman (CMO)	n/a	6	\$63	7	\$59	n/a
-- Office of Internal Affairs (OIA) 3/	\$158	0	\$124	0	\$94	n/a
-- Office of Executive Secretariat (OES)	\$108	21	\$108	21	\$82	n/a
-- Special Assistant for Investigations (SAI) 4/	\$59	7	\$54	5	\$42	n/a
Subtotal, OAO	\$325	34	\$367	35	\$291	0
Total, OC	\$3,293	149	\$3,202	151	\$1,244	151
Office of Management & Systems (OMS):						611
Office of Management & Systems/Immediate Office (IO)	\$150	15	\$75	10	\$69	n/a
Office of Information Resources Management (OIRM)	\$13,633	75	\$4,840	73	\$1,394	n/a
Office of Planning and Evaluation (OPE)	\$322	48	\$399	46	\$304	n/a
Office of Management (OM)	\$9,392	500	\$7,142	493	\$6,130	n/a
Subtotal, OMS	\$23,697	638	\$12,456	624	\$7,897	611
Office of Policy (OP):						37
Office of Policy/Immediate Office (OP/IO) 6/	\$325	38	\$291	38	\$222	37
Regulations Policy and Management Staff (RPMs)						
Policy Development and Coordination Staff (PDCS)						
Policy Research Staff (PRS)						
International Policy Staff (IPS)						
Subtotal, OP	\$325	38	\$291	38	\$222	37
Office of External Affairs (OEA):						197
Office of External Affairs (OEA)/IO	\$289	13	\$167	28	\$55	n/a
Office of Public Affairs (OPA)	\$1,182	69	\$921	69	\$707	n/a
Office of Health Affairs (OHA)	\$785	39	\$564	23	\$464	n/a
Office of Legislative Affairs (OLA)	\$158	33	\$112	33	\$66	n/a
Office of Consumer Affairs (OCA)	\$296	31	\$198	27	\$158	n/a
Office of AIDS and Special Health Issues (OASHI)	\$407	14	\$93	14	\$86	n/a
Office of Women's Health (OWH)	\$225	3	\$33	7	\$83	n/a
Subtotal, OEA	\$3,342	202	\$2,088	201	\$1,619	197
Office of Operations (OO):						25
Office of Operations (OO)/IO	\$59	7	\$69	6	\$52	25
Office of Regulatory Affairs (ORA)	\$47,720	3,360	\$44,169	3,368	\$34,637	3,268
Center for Devices and Radiological Health (CDRH)	\$18,896	1,116	\$23,082	1,107	\$21,279	1,084
Center for Biologicals Evaluation and Research (CBER) 7/	\$34,544	870	\$31,911	871	\$24,247	864
Center for Drug Evaluation and Research (CDER) 8/	\$46,450	1,608	\$44,575	1,644	\$26,485	1,721
National Center for Toxicology Research (NCTR)	\$22,727	245	\$10,785	239	\$17,590	229
Office of Science (OS) 9/	\$1,078	2	\$49	2	\$37	n/a
Center for Food Safety and Applied Nutrition (CFSAN)	\$21,386	868	\$23,579	850	\$16,764	825
Center for Veterinary Medicine (CVM)	\$5,888	270	\$4,297	263	\$3,179	252
Office of Orphan Products Development (OOPD)	\$12,504	18	\$12,464	18	\$12,435	n/a
Subtotal, OO	\$211,252	8,364	\$194,990	8,368	\$156,705	8,168
GRAND TOTAL, FDA	\$241,999	9,391	\$213,017	9,382	\$167,687	9,264

Footnotes

- * Total Funding includes S&E and PDUFA dollars. FTE Ceiling includes S&E, PDUFA, Certification, and Reimbursables.
- ** Proposed break-out of FTEs for FY 1997 are not available for the FDA Offices as of 5/31/96.
- 1/ EAC dollars and FTEs are included in OC/IO.
- 2/ SAS dollars and FTEs are included in OC/IO.

- 3/ OAO/OIA FTEs are included in ORA's FTE Ceiling for FYs 1994-1996 (12 FTEs in 1994, 14 FTEs in 1995, 14 FTEs in 1996).
- 4/ SAI FTEs were not displayed on FTE report until 1993. Dollars are reflected to support 4 FTEs for 1992.
- 5/ FTE Ceiling was not reflected for the OMS/IO in FY 1992 because the administrative code was not yet approved.
- 6/ FTE Ceilings were not reflected for the OP Offices in FY 1992 because the administrative codes were not yet approved. For FYs 1994-1996, dollars and FTEs for their OP Offices were consolidated into OP/IO due to streamlining initiatives.
- 7/, 8/ CBER and CDER were combined in FYs 1986 and 1987.
- 9/ OS was reassigned from OC/IO to OO/IO as of FY 1996.
- 10/ Reflects FDA's original FTE ceiling at the beginning of FY 1996 and the original allocation to centers and offices as cited above.

FOOD AND DRUG ADMINISTRATION

Ten-Year Funding History (FY 1986 - FY 1997 Request)

Footnotes

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These footnotes provide reasons for significant fluctuations in funding levels between fiscal years.

Office of the Commissioner

FY 1991: ADPE purchase \$860
 FY 1992: Breast Implant Hotline \$200, ADP/LAN \$140
 FY 1995: Tobacco \$1,540
 FY 1996: Tobacco \$1,580

Office of Management & Systems

FY 1987: OIRM: ADPE purchase - \$590
 FY 1990: OIRM: ADPE purchase, training - \$440
 OM: ADPE/Software purchase - \$630
 Mail Processing Contract - \$240
 Building Safety & Maintenance - \$400
 FY 1991: OM: ADPE/Software purchase - \$800
 Personnel Investigations - \$290
 FY 1992: OMS/IO: Contracts - \$1,400
 OPE: Regulatory Impact Analyses Study - \$150
 LAN - \$120
 OM: ADPE/Software Upgrade/Improvements - \$850
 FY 1993: OMS/IO: Contracts - \$540
 Administrative Systems Development - \$600
 User-Fee Standard Cost Study - \$690
 FY 1994: OMS/IO: Strategic systems development - \$6,600
 OIRM: ADPE purchase - \$460
 OPE: MQSA planning and development - \$250
 OM: ADPE/Software Upgrade/Improvements - \$510
 FY 1995: OIRM: Strategic systems development - \$10,810
 OM: ADPE purchase - \$1,780,
 Security Enhancements - \$260

Office of Policy None

Office of External Affairs

FY 1991: OHA: Contracts - \$880
 FY 1992: OEA/IO: Breast Implant Hotline - \$350
 Children's Food Labeling program- \$100
 OPA: New Food Labeling Education Campaign and other initiatives - \$390
 FY 1994: OASHI: AIDS Projects - \$240

Office of Operations (Immediate Office/Office of Regulatory Affairs)

FY 1987: ORA: ADPE purchase - \$2,250
 Contracts/Equipment - \$1,450
 FY 1990: ORA: ADP/Lab Equipment purchase - \$7,280
 Field Training/Contracts - \$960
 FY 1991: ORA: ADPE/Software/Systems purchase/development - \$7,350
 Field Lab Equipment - \$2,000
 Field relocation costs - \$2,680
 FY 1994: ORA: MQSA - \$10,640
 FY 1995: OS: FDA Information Retrieval System \$940

Center for Devices and Radiological Health (CDRH)

FY 1994: MQSA/Medical Devices -

Center for Biologics Evaluation and Research (CBER)

FY 1994: Immunization/Blood programs - \$10,800
 PDUFA - \$2,610

Center for Drug Evaluation and Research (CDER)

FY 1987: Contracts - \$2,060
 FY 1989: AIDS - \$1,000
 FY 1990: Generic Drug Activities - \$4,460
 FY 1991: Generic Drug Research - \$5,030
 Equipment - \$1,900
 FY 1994: Generic Drug Activities - \$1,040
 Women Health Projects - \$540
 PDUFA activities - \$7,990
 FY 1995: PDUFA and other activities - \$5,140

Question. For each of the FDA offices listed above, please explain the role and functions of the office, and justify the FY 1997 funding and staffing levels proposed for the office.

Answer. I would be happy to provide functional statements for the offices requested, as well as justification for the increases included in our FY 1997 budget submission, for the record.

[The information follows:]

Foods

FDA is the primary public health agency responsible for assuring that the Nation's food supply is safe, sanitary, wholesome, and honestly labeled, and that cosmetic products are safe and properly labeled. FDA conducts an extensive program of pre-market review of food and color additive petitions, post-market surveillance, education, technical assistance, and research which plays a major role in keeping the food supply in the United States the safest in the world.

Over the past several years the Agency has continued to ensure the quality and safety of foods and cosmetics while dealing with the increased responsibilities of additional statutory authorities and the need to reduce the overall size of the government through streamlining. During this period, the food supply has grown dramatically while new and more complex safety issues, such as emerging microbial pathogens, natural toxins, and technological innovations in food production and processing, have developed. FDA has continued to provide consumers with a high level of assurance regarding the safety of food and cosmetic products without a substantial increase in resources, and is working diligently to continue that level of service to the American public. Even though the combination of factors mentioned above is making it increasingly difficult, the Agency is addressing these issues by trying to develop and implement new and innovative strategies which might be effective but less resource intensive.

Drugs

FDA's Human Drug Program is responsible for ensuring that all drug products used for the prevention, diagnosis, and treatment of disease, are safe and effective. To achieve this mandate, premarket review, postmarket assurance, education, research and other strategies are used.

The program's primary goals include: regulating tests of investigational new drugs (INDs); evaluating new drug applications (NDAs) and abbreviated new drug applications (ANDAs) for the marketing of new and generic drugs, respectively; monitoring the quality of products manufactured in, or imported into, the United States; collecting and evaluating information on adverse effects experienced with marketed products; regulating the advertising and promotion of prescription drugs; establishing and monitoring standards for use, labeling and composition of both prescription and over-the-counter (OTC) drugs; developing and maintaining the scientific research and improved management information systems capability necessary to achieve greater efficiency and effectiveness of

operations; promoting informational and educational programs addressing both medical and consumer interests; reducing the time required for the review of drugs for life-threatening diseases such as AIDS and AIDS-related diseases and cancer; and continually improving the review process for drug applications by revising requirements and applying efficient management techniques, such as the Prescription Drug User Fee program which has specific performance goals to reduce review times.

OPD

FDA continues to carry out a program to encourage the development of drugs, biologicals, medical devices, and medical foods for rare diseases and conditions. The Office of Orphan Products Development (OPD) has responsibility for implementing this program. A major activity of this office is administering the orphan designation process by which product sponsors become eligible for the marketing exclusivity and tax credit incentives of the Orphan Drug Act (ODA). There are currently 737 designated orphan products. One hundred and nineteen orphan drugs and biologics have received marketing approval from FDA.

Timeliness of the designation review process is important to sponsors which make product development decisions based on whether or not a product receives orphan designation. Reductions in the time to first action in these categories can be expected to speed and encourage development of products to prevent and/or treat rare diseases. Currently the average time to first action on an orphan designation application is 60 days - this assumes that a referral outside the office is not required. Average time to first action on an amendment request is 90 days. FDA will continue to streamline the designation review process in order to reduce these times in the future.

A second major activity is the administration of the Orphan Products Grants Program, which provides funding for clinical research on products to prevent and treat rare diseases and conditions. The Orphan Products Grants Program is an increasingly significant program of OPD. Congress has appropriated \$15.150 million for the orphan products development program in FY 1996 of which \$12 million is to be spent for the OPD Grants Program. Over the thirteen years of the OPD Grants Program, 302 grants have been funded. These grants have resulted in many publications and presentations that have increased knowledge about rare diseases and conditions. Also, twelve products have achieved FDA marketing approval through studies funded in whole or in part by this Grants Program.

Products to treat children are an important class of orphans. Sponsors seldom spend valuable resources to develop pediatric dosages for products that are readily available. As a result, drugs approved for use in adults often are not tested and labeled for children. FDA has funded several studies to test approved products for pediatric use. One orphan grant study is investigating pentamidine for prevention and treatment of pneumocystis carinii pneumonia in pediatric AIDS patients. Another study is underway on naltrexone, a narcotic antagonist, is being tested to treat autistic children.

To effectively promote the development of products to prevent and/or treat rare diseases, FDA must assure that the funded research is carried out and meets Federal requirements. FDA monitors grantee performance through telephone calls and site visits. As monitoring increases, the quality of studies can be expected to improve. Currently 80% of active grants receive at least three phone contacts and/or site visits per year. FDA has just implemented a new database system which will track various aspects of the program and will enhance the project officer's ability to assure compliance with Federal requirements.

In order to encourage the best researchers to make application to the Program, FDA makes presentations to industry and academic groups involved in research on products for rare diseases. As the number of such presentations increases, the number of applications and hence the quality of the funded studies will improve. In FY 1995, FDA made 12 such presentations.

Biologics

The availability of safe and effective biological products for disease prevention and treatment and the assurance of the safety of the nation's blood supply is an essential element of the Nation's health care delivery system. FDA is responsible for assuring that blood and blood products, blood test kits, bacterial vaccines and antigens, viral vaccines, therapeutic agents, and other biological products intended for use in the prevention, diagnosis, and treatment of disease in humans are pure, potent, safe, and effective, as well as properly labeled for their intended uses.

FDA's Biologics program includes registration and inspection of blood banks and other firms processing blood; licensing and inspection of firms collecting human source plasma; evaluating and licensing Biologics manufacturing firms and products; lot release of licensed products; removal of ineffective, unsafe, or improperly labeled products from the market; development of necessary regulations, compliance programs and guidelines; and the conduct of research, in concert with other HHS public health agencies, academia, and industry, to further the development of new products and to provide a sound scientific basis for their regulation. The agency sponsors and conducts AIDS-related research to foster the development of new biological products and regulated marketed biologics intended for use in the prevention, treatment, and diagnosis of AIDS and AIDS-related diseases. In addition, the Agency seeks to improve the safety of childhood vaccines by sponsoring and conducting research toward the development of vaccines that are less reactogenic. FDA ensures that childhood vaccines are safe and effective through evaluation of products, their manufacture, and by monitoring adverse events associated with immunization.

Animal Drugs

The primary goals of the Animal Drugs and Feeds program are to: 1) assure that only safe and effective animal drugs, devices, feeds and feed additives are marketed; 2) assure that foods from animals that are administered drugs and food additives, in accordance with label directions, are safe for human consumption;

and 3) to work pro-actively to increase the availability and diversity of safe and effective products for use by the agricultural community.

The Agency strives to process New Animal Drug Applications as quickly as possible to ensure that safe and beneficial veterinary drugs intended for the treatment and/or prevention of diseases in animals, and the improved production of food-producing animals, are approved for use as soon as possible. In addition, FDA maintains continuing surveillance over all animal drugs, devices, and feeds marketed in interstate commerce in order to minimize threats to human and/or animal health which might arise as a result of the use of these products.

Surveillance of marketed products and the business industry is accomplished through review of drug experience reports and compliance programs implemented by the FDA field offices through inspections, sample collections and analysis, investigations, and other activities. Regulatory actions are taken as needed to control violative goods and firms.

Devices

FDA pursues two primary goals under the Medical Devices and Radiological Products program: (1) to ensure the safety and effectiveness of medical devices; and (2) to eliminate unnecessary exposure to radiation from medical, industrial, and consumer products while maximizing the benefits from necessary exposure.

Medical devices are regulated pursuant to the Medical Device Amendments of 1976, the Safe Medical Devices Act of 1990, and the Medical Device Amendments of 1992. Radiation-emitting electronic products are regulated pursuant to the Radiation Control for Health and Safety Act of 1968 and the Mammography Quality Standards Act of 1992.

FDA employs a wide variety of regulatory mechanisms to ensure the safety and effectiveness of medical devices. All devices are classified into three categories, depending on the level of regulation required to ensure safety and effectiveness.

Class I devices are subject to general controls, such as Good Manufacturing Practices requirements, labeling requirements, and registration with FDA.

Class II devices are subject to special controls, such as performance standards, special postmarket surveillance efforts, and patient registries.

Class III devices are required to undergo premarket evaluation and receive FDA approval prior to being marketed.

Through the authorities delegated to FDA to implement the Mammography Quality Standards Act of 1992, FDA ensures that women have access to safe and effective mammography services.

Postmarket surveillance activities, such as the MedWatch mandatory and voluntary Medical Device Reporting program, and inspections of manufacturing plants, help ensure the continued safety and effectiveness of marketed devices. These activities also provide an early warning of problems, allowing FDA and industry to take corrective action before the public health is threatened.

NCTR

The National Center for Toxicological Research (NCTR) conducts peer-reviewed studies to help FDA form the scientific basis for current and future regulatory decisions. To date, the NCTR studies have focused on two goals: research to improve risk assessment for FDA-regulated products; and methods development to support FDA enforcement and improve the basis of risk assessment in the future.

In response to initiatives associated with "Reinvention of Government" and the "Government Performance and Results Act," the NCTR has undertaken a fundamental review of its desired outcomes. In doing so, the Center has developed a strategy with three components which have been reviewed and endorsed by our Science Advisory Board. What the Center has traditionally accomplished can be described as *method-, agent- or concept-driven research*. This effort to collect and define relevant scientific knowledge continues, and it provides the basis for two important new areas: the *development of new predictive systems for assessing toxicity*; and the *development of knowledge bases to support the FDA review process*. The development of new predictive systems has the goal of using newly developing scientific information to develop new tests and approaches to evaluate toxicity and carcinogenicity of chemicals and other agents regulated by the FDA. These tests would either complement or eventually replace tests in current use, such as the 2-year rodent assay for carcinogenicity. The development of knowledge bases collects information from a broad range of scientific sources and applies advanced computer learning technology to find associations within existing data and enhance the predictive nature of existing information.

Office of the Commissioner

The Commissioner and the Deputy Commissioners are responsible for the efficient and effective implementation of the Food and Drug Administration's (FDA) mission.

Mission: The mission of the FDA is to protect the public health of the Nation by regulating foods, drugs, biological products, cosmetics, medical devices, ionizing and nonionizing radiation-emitting products and substances, poisons, pesticides, and food additives. FDA's regulatory functions are geared to insure that: Foods are safe, pure, and wholesome; drugs, medical devices, and biological products are safe and effective; cosmetics are harmless; all of the above are honestly and informatively packaged; and that exposure to potentially injurious radiation is minimized.

Executive Assistant to the Commissioner

Provides confidential advice and assistance to the Commissioner on a variety of matters and issues within or affecting the FDA; conducts special studies and analyses, develops position and option papers, troubleshoots problems and performs other complex, substantive assignments which are of a confidential and/or sensitive nature, cut across agency programs and organizational lines and often involve high level contacts and liaison with officials of other government and non-governmental organizations.

Senior Advisor for Science

Serves as principal advisor to the Commissioner on all matters relating to science policy and research operations, including: the kinds and levels of scientific research projects to be undertaken by the Agency; the establishment and maintenance of support with the outside scientific community; and the evaluation of research plans and accomplishments of the Agency's scientific units.

Office of Chief Counsel

Subject to the professional supervision and control of the General Counsel, represents FDA in court proceedings and administrative hearings with respect to programs administered by FDA. Provides legal advice and policy guidance for programs administered by FDA. Acts as liaison to the Department of Justice and other Federal Departments for programs administered by FDA.

Office of Advocacy and Oversight

Advises the Commissioner, other Policy Board members, and key Agency officials on policy and other agency-level activities and decisions that affect Agency wide programs, projects, strategies, and initiatives including issues that are sensitive and controversial which impact upon Agency relations with other Federal agencies and foreign governments. Oversees and directs the Agency's ombudsman, internal affairs, investigations, and executive secretariat activities to ensure coherence in decision making and the efficient operation of these functions internally and across Agency jurisdictions.

Chief Mediator and Ombudsman

Investigates and resolves internally and externally generated complaints and disagreements regarding the processing of various applications for products regulated by the FDA. These relate to matters of administrative processing and not the scientific/technical content of decisions or other actions; nor issues which have a question of a legal nature for which established procedures for redress exist.

Office of Internal Affairs

Provides a centralized Agency wide investigative resource for the Commissioner, the Deputy Commissioners, and top Agency management; conducts investigations; and serves as investigative liaison between FDA and the Office of the Inspector General.

Executive Secretariat

Assures that materials in support of recommendations presented for the Commissioner's consideration are comprehensive, accurate, fully discussed and encompass the issues involved. Provides correspondence control for the Commissioner, provides central control for and processes all Agency public correspondence directed to the Commissioner.

Special Assistant for Investigations

Serves as an advisor to the Commissioner and performs substantive and complex investigation assignments related to identifying potentially sensitive, controversial activities which involve and cut across Agency wide programs and activities.

Office of Administrative Law Judge

Schedules and conducts formal evidentiary public hearings under 21 CFR Part 12, pursuant to the Federal Food, Drug, and Cosmetic Act, as amended, as well as other related laws and the Administrative Procedure Act (5 U.S.C. 511 et. seq.).

Office of Equal Employment and Civil Rights

Advises and assists the Commissioner and other key officials on equal employment opportunity and Civil Rights activities which impact on policy development and execution of program goals.

Office of Management and Systems

Advises and assists the Commissioner regarding the performance of FDA resource planning, development, and evaluation activities. Develops programs and planning strategy through analysis and evaluation of issues affecting policies and program performance. Assures that the conduct of Agency administrative and financial management activities effectively supports program operations.

Office of Management

Advises and assists the Commissioner and other key officials on all phases of management inherent in the operations of FDA. Directs the effective utilization of all management resources and the implementation of operating programs by coordinating the funding, manpower, facilities, and equipment resources of the Agency.

Office of Information Resources Management

Performs Agency information resources management functions and advises the Commissioner on information resources management issues.

Office of Planning and Evaluation

Advises and assists the Commissioner and other key officials concerning the performance of FDA resource planning, development, and evaluation activities. Develops program and planning strategy through analysis and evaluation of issues affecting policies and program performance. Develops, installs, and monitors the Agency wide planning system including the five-year plan, strategic plan, and functional plans.

Office of Policy

Directs and coordinates the Agency's rule making activities and regulations development system. Initiates new and more efficient systems and procedures to accomplish Agency goals in the rule making process and plans "regulatory reform" steps.

Regulations Policy and Management Staff

Coordinates rulemaking and regulations development activities. Reviews proposed regulation, final regulations, and other Agency documents to be published in the Federal Register; assures regulations are necessary, consistent with established Agency policy, clearly written, enforceable, coordinated with other Agency components (the Office of the Chief Counsel, and Federal, State, and local government agencies), appropriately responsive to public participation requirements and applicable executive order, and responsive to any applicable requirements for assessment of economic and environmental effects.

Policy Development and Coordination Staff

Advises and assists the Deputy Commissioner for Policy concerning information that may affect current or proposed FDA policies. Advises the Deputy Commissioner for Policy and other senior Agency officials on the formulation of broad Agency regulatory policy. Establishes procedures for Agency policy formulation and monitors policy formulation activities throughout the Agency.

Policy Research Staff

Proposes and researches policy alternatives. Identifies and researches the impact of FDA policies on national health issues and technological advances. Identifies and researches the impact of external factors, including national health issues and technological advances.

International Policy Staff

Serves as the Agency focal point for developing and maintaining communications, policies, and programs with regard to regulations development and international harmonization, including international standard setting and bilateral agreements on inspections.

Office of External Affairs

Advises and assists the Commissioner on legislative activities; public information programs; health issues; consumer affairs issues; industry-related issues ; and small business, scientific, and trade affairs.

Office of Public Affairs

Advises and assists the Commissioner and other key officials on all public information programs; acts as the focal point for disseminating news on FDA activities and as a liaison with the Department on public information programs.

Office of Health Affairs

Advises and assists the Commissioner and other key officials on health issues which have an impact on policy, direction, and long-range program goals. Coordinates Agency relations with health professional groups and represents the Agency on issues involving technology assessment and coverage decisions regarding FDA-regulated products.

Office of Legislative Affairs

Advises and assists the Commissioner and other key officials concerning legislative needs and pending legislation and oversight activities which affect FDA. Serves as the focal point for overall legislative liaison activities within FDA and between FDA, the Department, and other agencies. Advises and assists members of Congress and congressional committees and staffs in consultation with the Office of the Secretary, on Agency actions, policies, and issues related to legislation which may affect FDA.

Office of Consumer Affairs

Serves as the Agency focal point for coordinating information from Agency components about significant public interest issues; develops mechanisms to gather consumer views for use in developing Agency policy on issues of interest to the public; and apprises the Policy Board and Commissioner on the impact of consumer involvement in resolving these issues.

Office of AIDS and Special Health Issues

Serves as an information resource to FDA and provides advice to the Commissioner, Deputy Commissioner, and other senior FDA staff on matters related to AIDS, cancer, Alzheimer's Disease, and other special health issues.

Office of Women's Health

Serves as the principal advisor to the Commissioner and other key officials on scientific, ethical, and policy issues relating to women's health. Provides leadership and policy direction for the Agency regarding issues of women's health and coordinates efforts to establish and advance a women's health agenda for the Agency. Monitors the inclusion of women in clinical trials and the implementation of guidelines concerning the representation of women in clinical trials and the completion of gender analysis.

Office of Operations

Advises and assists the Commissioner and other key officials on compliance-oriented matters. Develops and administers all Agency field operations and provides direction and counsel to Regional Food and Drug Directors. Administers the regulation of biological products, drug products, foods and cosmetics, medical devices, and animal drugs.

Office of Regulatory Affairs

Advises and assists the Commissioner and other key officials on regulations and compliance-oriented matters that have an impact on policy development and execution and long-range program goals. Coordinates, interprets, and evaluates the Agency's overall compliance efforts; as necessary, establishes compliance policy or recommends policy to the Commissioner.

Office of Science

Advises and assists the Deputy Commissioner for Operations, the Commissioner, and other key officials on scientific issues which have an impact on policy, direction, and long-range goals. Coordinates and provides guidance on special and overall science policy in program areas which cross major Agency component lines and scientific aspects which are critical or controversial, including the Agency risk assessment policy.

FY 1997 Funding and Staffing Request

The centers and offices described above support all programs and activities within FDA. The FY 1997 request reflects the same level (budget authority) as appropriated in FY 1996. The request redirects one-time buildings & facilities funding to finance a food safety initiative in FY 1997. With the exception of user fees, all other programs within FDA are straight lined at the FY 1996 level. In addition, FDA is reflecting the same FTE level in FY 1997 as its FY 1995 level (9,264 FTEs). This reflects an increase of 282 FTEs in user fee programs (PDUFA - 247 FTEs, and MQSA - 35 FTEs) and a decrease of 282 FTEs in non-user fee base programs. The following describes FDA's FY 1997 request:

Current Law:

Food Safety Initiatives +\$3,800,000

FDA proposes a series of Food Safety initiatives to address current concerns and to meet the safety issues we are likely to encounter as we enter the 21st century. The initiatives include expedited implementation of the new Seafood HACCP regulation (\$1,200,000); Federal and state partnerships to enhance food safety (\$1,200,000); and new approaches for the review of food additive petitions (\$1,400,000). For FY 1997, FDA is applying a \$3,800,000 increase to its operating base to cover the anticipated FY 1997 cost of these initiatives.

Prescription Drug User Fees Act (PDUFA) +\$2,805,000

The success of the PDUFA is a model for reinventing government. By bringing together the government experts, the industry, consumers and Congress, we developed a consensus on performance goals. Next we agreed on a timetable by which FDA must reach those goals and then make sure the necessary resources were available. The result is the continued decline in drug median approval times, surpassing all 1995 interim goals of the user fee program and the approval of seven drugs for AIDS and other life-threatening diseases in six months or less. The greatest performance gains were achieved in the number and speed of drug approvals. The agency approved for marketing 82 drugs -- a 32 percent increase over the 62 drugs approved in 1994 -- with a median time of 16.5 months, 13 percent below the 19 months required for approvals in 1994.

FDA has consistently reached our PDUFA goals much faster than was planned and we expect to continue with the funds requested in our FY 1997 budget. For FY 1997 FDA requests an increase of \$2,805,000 and 203 FTE and estimates total user fees of \$87,528,000 and 700 FTE to continue implementation of PDUFA. In FY 1997, 90 percent of filed New Drug Applications (NDA) and Product License Applications (PLA)/Establishment License Applications (ELA) submissions are to be reviewed within 12 months.

Mammography Quality Standards Act (MQSA) +\$403,000

Federal and state personnel will inspect 10,000 mammography facilities and conduct 3,000 facility certifications. To cover inflation and meet the costs of the program, FDA requests an increase in MQSA authorized inspection user fees of \$403,000 for a total of \$13,403,000 and 35 FTEs.

During FY 1995, FDA continued its efforts to implement the new requirements while maintaining patient access to quality mammography. FDA trained and certified 180 MQSA inspectors, conducted 4,500 facility inspections and 6,000 certifications, implemented an extension process for 2,000 provisionally certified facilities to avoid a shortage in mammography services, changed the status of 4,000 facilities from provisional to full certification, implemented an inspection quality assurance program, and completed draft final regulations. To help disseminate MQSA-related information, FDA established a Mammography Information Service to assist women in obtaining local information about FDA-certified facilities, and continued outreach efforts to 17,000 mammography facilities and other interested parties.

Buildings and Facilities -- \$3,800,000

The FY 1997 budget request for Buildings and Facilities of \$8,350,000 is \$3,800,000 below the FY 1996 level. This decrease reflects one-time funding received in FY 1996 for continued renovations at the Arkansas Regional Lab located at the NCTR in Jefferson, Arkansas. The requested \$8,350,000 will enable the Agency to maintain its many facilities nationwide by addressing only our most urgent repair and improvement requirements.

Proposed Law:

In addition to the existing user fees, FDA will be seeking separate legislative approval of the following additive user fees:

Medical Device Review - User Fees +\$24,476,000

FDA is requesting \$24,476,000 in additive user fees, to be collected from the medical device industry. These application fees will provide the agency with the resources that it needs to promptly review device applications. If user fee legislation is adopted, we have committed to making decisions on 510(k) applications within 90 days. Ninety-nine percent of all premarket applications are filed under section 510(k). We have also committed, in connection with user fee legislation, to reviewing the more complicated PMA applications within 180 days.

For FY 1997 the user fee goal is to increase the percentage of 510(k) applications completed within 90 days from 50 percent in FY 1995 to 90 percent, and to increase the percentage of first review cycles for PMAs completed within 180 days from 45 percent in FY 1995 to 75 percent. The proposed user fees will also help to increase guidance to industry, strengthen postmarket monitoring, improve

the Agency's ability to assess public health risks, and upgrade automation capabilities and integrate program information systems.

Import Inspection Enhancement - User Fees +\$15,000,000

FDA is proposing to collect \$15,000,000 in additive import user fees to fund the Operational and Administrative System for Import Support (OASIS). The system is expected to enable the agency to substantially reduce the risk of potentially harmful foods and other imported products reaching the American market place. The importer/broker community benefits through faster turn-around times, elimination of large volumes of paperwork, and reduced costs of doing business. OASIS will give FDA staff access to historical information to better target products and firms at high risk, the ability to plan inspections more effectively, and the ability to share findings from inspection and lab analyses with other offices.

FY 1996 Appropriation to FY 1997 Request

	FY 1996	Increase	Decrease	FY 1997
Salaries & Expenses.....	\$819,971	+\$3,800	---	\$823,771
GSA Rent.....	46,294	---	---	46,294
Buildings & Facilities.....	12,150	---	-3,800	8,350
<u>User Fees - Current Law:</u>				
PDUFA.....	84,723	+2,805	---	87,528
MQSA.....	13,000	+403	---	13,403
Certification Fund/FOI Fees.....	5,204	+137	---	5,341
Subtotal, Current Law	981,342	+7,145	-3,800	984,687
<u>User Fees - Proposed Law</u>				
MDUFA.....	---	+24,476	---	24,476
Imports.....	---	+15,000	---	15,000
Subtotal, Proposed Law	---	39,476	---	39,476
Total, FDA	\$981,342	+\$46,621	-\$3,800	\$1,024,163

USER FEE PROPOSALS

Question. The fiscal year 1997 budget assumes additional collections totaling \$39.5 million from the proposed authorization of two new user fees: (1) \$15.0 million to improve the effectiveness and efficiency of FDA's imported products regulatory compliance program; and (2) \$24.5 million to accelerate the medical device approval process. Both of these fee proposals were included in the President's Fiscal Year 1996 Budget. Were the legislative proposals to authorize the new medical device and import inspection enhancement user fees submitted to the Congress for consideration last year? If so, are we talking about the same legislative proposals again this year? What makes you believe that you will have any greater success this year in winning Congressional support for these new user fee proposals?

review to reduce the PMA backlog. With this shift, FDA expects to complete 53 percent of the first cycle PMA reviews within 180 days in FY 1996, as compared to 45 percent in FY 1995.

FDA plans to reallocate 10 more FTEs from 510(k) review to PMA review in FY 1997. In FY 1997, FDA estimates that 45 percent of the first cycle PMA reviews will be completed within 180 days. The decrease of first cycle PMA reviews completed in FY 1997 as compared to FY 1996 -- which is 53 versus 45 percent -- is expected because of increases in PMA review workload from reclassification activities and calls for premarket approval applications for pre-amendment devices.

Question. Dr. Kessler, you continue to advocate the need for a medical device user fee. I understand that in discussions with industry in 1994, FDA maintained that it would not be able to reduce the tremendous backlog of applications at FDA and shorten review times without user fees. In fact, FDA staff presented industry with a chart at the time showing what would happen to pending 510(k)s with and without user fees. That chart indicated that the backlog of 510(k) applications would temporarily decline but then begin a steady rise without user fees. You seem to have made substantial progress over the past couple of years. The quarterly report just submitted to this Subcommittee claims that there is no backlog for 510(k)s and that the review times for 510(k)s are going down. In fact, according to the report, FDA eliminated nearly 1500 backlogged applications in about 9 months. Why should the medical device industry believe user fees are necessary when FDA has demonstrated its ability to accomplish what it once maintained it could not do without user fees?

Answer. Even without medical device user fee funding, FDA expects to continue improving its review performance in FYs 1996 and 1997 by reducing its review times and providing a more stable and predictable product review process. To meet the non-user fee review goals, FDA will continue to set priorities and manage the device program to improve its performance. To help reduce unnecessary industry workload and better use its own resources, FDA is undertaking management initiatives to reinvent its medical device review program. One is the exemption of hundreds of devices from the 510(k) premarket clearance requirement, which allows the affected products to reach the market sooner and reduces industry and FDA workload. Another is designation of high priority "expedited" PMAs. A third is a project management initiative for PMAs in two device review divisions which will enable FDA to prospectively plan, organize, and manage work to better use review resources and increase timeliness. A fourth is new strategies to aid in IDE development and review. Finally, we are starting a pilot program to test third-party review of low and moderate-risk medical devices by outside organizations to determine whether such a system can speed device review while reducing review costs and maintaining the independence of the review process. The bottom line is that, as predicted, we have increased the timeliness of reviews without user fees, but that improvement would be faster, more dramatic, and longer lasting, with user fees. I will provide, for the record, a table which shows our premarket review performance.

[The information follows:]

Answer. With respect to imports, the Department is now developing proposed legislation to authorize fees to finance an automated clearance system for FDA-regulated products. The timetable for transmitting this proposal to Congress will depend on consideration of relevant trade policy questions, consultation and dialogue with the affected importer community, and appropriate review and approval with the Executive Branch. With respect to medical device user fees, the Administration continues to support medical device user fee legislation through inclusion of this proposal in the budget.

Question. Am I correct in assuming that FDA's appropriations request does not rely on the revenues that would be generated by these fees--that separate legislative approval of these fee proposals is being sought?

Answer. The Administration is committed to working cooperatively with the appropriate committees of Congress to develop and support legislation that will provide additive resources to FDA -- resources that can be dedicated to enhancing the timeliness and quality of FDA's medical device evaluation activities and finance an automated clearance system for FDA-regulated products.

MEDICAL DEVICE USER FEE PROPOSAL

Question. Dr. Kessler, your written statement indicates that if the proposed medical device fee is adopted, FDA is committed to making decisions on 510(k) applications within 90 days and to review more complicated PMA applications within 180 days. What is FDA committed to, in terms of the length of time in which it will approve 510(k) and PMA applications, if the requested new user fee legislation is not adopted?

Answer. For 510(k)s, our goal is to screen for completeness and perform at least one cycle of in-depth review on all submissions within a 90-day review cycle. Also, we will maintain the average review time at less than 90 days per cycle, which should prevent the accumulation of a new backlog. For new PMA applications identified for expedited review that can be filed, our goal is to finish at least one full cycle of complete review and communicate the results of our review to the applicant in writing within 180 days of submission. For expedited applications with major deficiencies, we will complete a second review cycle within 90 days of receiving complete answers to the deficiencies. For other new PMAs, we believe an achievable target, in light of our present resources and workload, will be to have at least 75 percent of first-cycle reviews completed and action taken within a year after filing. We also want to continue to stress timely completion of post-advisory panel PMAs, and we aim to take post-panel action--either non-approval, approvable, additional information letter or approval -- on these PMAs within 30 days of the panel meeting.

Let me provide some specifics. In the 510(k) area for FY 1996, FDA expects to complete more than 90 percent of the first actions on a 510(k) within 90 days as compared to 81 percent in FY 1995), and 60 percent of the final 510(k) actions within 90 days as compared to 50 percent in FY 1995). For FY 1997, FDA projects 90 percent and 68 percent, respectively. To help improve PMA performance in FY 1996, we are shifting FTEs from 510(k) review to PMA

CDRH PREMARKET REVIEW PERFORMANCE

Fiscal Year	510(k)					PMA			
	Re-ceived	Acted On	End Of Year Pending	Final Action Within 90 FDA Days	First Action Within 90 FDA Days	Re-ceived	Acted On	End Of Year Pending	First Action Within 180 FDA Days
1995 actual	6,056	7,980	2,450	50%	81%	39	53	125	45%
1996 Pres Budget estimate	5,875*	6,300	2,025	60%	90%	45	60	110	53%
1997 Pres Budget estimate (with '96 resources)	5,700*	5,845	1,880	68%	90%	65	60	115	45%
1997 Pres Budget estimate (with User Fees)	5,700*	6,125	1,600	90%	99%	65	100	75	75%
1997 Projected Agency Impact of 5% funding cut	5,700*	5,568	2,157	63%	85%	65	55	120	40%

* Within the last 15 months, 273 categories of the simplest Tier I products were exempted from submitting 510(k)s, bringing the total of device types exempt from premarket notification to 572.

IMPORT INSPECTION ENHANCEMENT USER FEE PROPOSAL

Question. The President's budget proposes that \$15 million in collections be raised through new user fees to expand and enhance operation of FDA's Operational and Administrative System for Import Support (OASIS). Specifically, to combine the Import Support and Information System and the Electronic Entry Processing System. Isn't it the responsibility of the FDA to protect the American marketplace against the risk of potentially harmful foods and other products? Why should importers be charged a fee to pay for enhancements to FDA's computer system to improve and make more efficient FDA's import inspection capabilities?

Answer. We are committed to the development and installation of the Operational and Administrative System for Import Support. We believe that the benefits of the system to the import community through the more rapid review and processing of import entries justify the imposition of the requested user fee. For example, FDA has already implemented the Electronic Entry Processing System (EEPS) on a nationwide basis. The EEPS enables FDA to electronically

screen information submitted by filers on import entries. The system also issues automated "May Proceed" notices when appropriate. Currently, over 60 percent of the FDA regulated products processed through the EEPS are issued automated "May Proceed" notices. This automated "May Proceed" is issued within minutes, as opposed to a day or more under the manual system previously used by FDA. The rapidity of our automated screening results in a significant cost savings to industry in terms of storage costs and their ability to move products to market quicker.

The full OASIS, which we hope to implement with the requested user fees, will further enhance the economic advantages of the automated system for the importing community. It will, for example, enable us to communicate our decision electronically on the less than 40 percent of entries that are further reviewed by FDA. The majority of these receive "May Proceed" notices without FDA examination of the product. Further enhancements to the OASIS will enable the system to electronically confirm, for example, that imported drugs have approved NDAs, that the foreign manufacturers of low-acid canned foods and acidified foods have registered and filed their processes with the Agency, and that medical devices and their manufacturers meet all necessary requirements for an approved 510(k) or PMA (pre-market approval).

These planned enhancements will benefit importers through a reduction in the time between arrival of an import entry and its release for delivery to domestic commerce. Reducing the clearance time from days to hours for these products will offer further significant internal efficiencies to importers, reduces demurrage and other storage/distribution costs associated with imports, and reduces inventory and delay costs to the ultimate commercial recipients of the imported goods.

The contractor currently working on the development of the OASIS, Booz, Allen & Hamilton, Inc., has completed a cost-benefit analysis of the OASIS. The report, completed in June of 1995, showed that the import community as a whole has benefitted greatly from the increase automated support to FDA's import operations afforded by the already implemented components of the OASIS. The benefits are anticipated to increase as the functionality of OASIS increases. They report that, based on their analysis, the import community should save upwards of approximately \$1.24 billion through FY 2001 if OASIS implementation goes forward on schedule.

The requested user fee will enable FDA to proceed with the scheduled design, implementation and planned enhancements to the OASIS system. Lack of the user fee could mean that the OASIS development may be slowed and the benefits to industry would be significantly postponed.

Question: Would such a fee be GATT legal?

Answer: Yes. The user fee falls within two classes of fees permitted under GATT. The first is the category of fees or other charges commensurate with the cost of services rendered, as permitted by Article II:2(c). The second is the category of fees and charges related to the approximate cost of services rendered, as permitted by Article VIII:1(a). Because the proposed user fee seeks only to recover the cost of implementing the electronic system to the approximate extent that it provides a service to importers, it is both commensurate with the cost of services rendered and limited in amount to the approximate cost of services rendered. Therefore, the user fee is permitted under GATT.

Question. Does this proposal have the support of importers/brokers? Is the importing community willing to pay a user fee for expedited service? What evidence do you have of this?

Answer. Consultations have been held with various importer organizations, and support for the system among importers does vary. However, they have indicated a willingness to consider support of the user fees as long as they are assured the fees will go exclusively to the OASIS system and necessary support functions and not to support overall FDA import operations.

Question. Is FDA spending any of its FY 1996 funds for OASIS? If so, how much is being provided and what is being funded? Where were these monies found since the FY 1996 budget relied on unauthorized user fee collections to fund these costs?

Answer. In July 1995, FDA issued a delivery order under the OASIS system development contract that overlapped two fiscal years. FY 1995 funds were used for this delivery order. Approximately \$2.2M of the FY 1995 funds covered 11 months of the delivery order work to be done by the contractor in FY 1996. An additional approximately \$1.6M for OASIS development and implementation costs in FY 1996 came from FDA's FY 1996 operating funds.

Question. What is the total cost of the enhancements you have determined are needed to FDA's Operational and Administrative System for Import Support (OASIS). Please list each systems project proposed or planned and its cost and describe how it will enhance the import inspection process.

Answer. We estimate the total costs for the design and development of these enhancement modules will be in the range of \$1.0M. We do not yet have a breakout of that total by each module. That figure does not include FY 1997 costs for OASIS system maintenance, user training, or the upgrading of the infrastructure that will be required for OASIS implementation. I would be happy to provide the information for the record.

[The information follows:]

Currently Identified Enhancements to OASIS

- o Product-based profiling module. This computerized element of OASIS will compile and coordinate current and historic regulatory information relating to imported products, foreign manufacturers/processors, shippers, countries of origin, etc., for each imported product processed in OASIS. The resultant information can automatically adjust the screening criteria the computer utilizes, and will help to focus FDA's attention on those foreign-origin products seeking to come into the country that have the greatest

potential for not meeting established safety, efficacy and quality standards.

- o Center management of screening criteria. This feature will enable each FDA Center to directly access and control the OASIS computerized product screening criteria for the commodities for which it has responsibility. The capability for the Centers to have direct access to manage and control the criteria will ensure more efficient and effective regulation of imported products.
- o Center on-line participation in compliance decisions. Center compliance officers will be able to participate interactively with their field counterparts in the compliance determinations being made for imported products, when there are policy issues that need to be resolved or when headquarters consultation is required as part of the decision-making process. This on-line communication capability can reduce the time required to reach a decision from the present days/weeks in the paper process to hours/days by using the electronic process.
- o OASIS-Center database linkage. This enhancement will enable the OASIS system to directly and automatically query Center databases to obtain the 510(k), registration/listing, licensing, etc., information required to make admissibility determinations for products being offered for entry to the United States. This system-to-system communication capability will greatly speed up the decisions on admissibility, will better ensure the reviews are done routinely, and will reduce the need for field import entry reviewers to manually access the center systems.

TOBACCO REGULATION

Question. Dr. Kessler, I received a letter this week from the Coalition on Smoking OR Health urging me "to provide the full budget request from the FDA for tobacco regulation." Will you please tell me what is the full FY 1997 budget request for tobacco regulation? Please provide the staffing and funding levels requested.

Answer. We did not make a specific FY 1997 budget request for the regulation of nicotine-containing tobacco products. We have previously estimated, that to carry out the requirements that were included in the proposed

rule, the Agency would use approximately 30 to 50 FTEs. Since we currently have about 27 FTEs assigned to the tobacco investigation and rulemaking, and since typically the first year following a major rulemaking an industry is given time to come into compliance, it appears that the current resources would be sufficient in FY 1997 to implement any final rule that might be promulgated.

Also, as budgets have continued to tighten it has not been uncommon for FDA to undertake major new regulatory initiatives without receiving or requesting additional resources. An example would be the rulemaking, implementation, and enforcement of the new Nutrition Facts food label that was a result of the Nutrition Labeling and Education Act of 1990. Although this was the most resource intensive regulatory initiative ever undertaken by FDA, the Administration did not make a specific budget request, nor did the Congress provide any additional resources for carrying out this extremely important and successful public health initiative.

Question. How much is being spent and what full-time equivalents are allocated for these activities for FY 1996?

Answer. In FY 1995, we expended about 27 FTEs and \$3.5 million. We anticipate an increase, in dollars, of about 10 percent for FY 1996, and about the same level of FTEs for FY 1996.

Question. What additional funding and staff resources will be required to implement and fully enforce the rule in future fiscal years?

Answer. At this time, we can only give a very rough estimate based on implementing and enforcing the proposed rule as written, not the final rule. For FY 1997, we estimate that between 30 and 50 FTEs would be needed to implement the rule as proposed, which is about 0.5 percent of our workforce. At the present time, our best estimate is that the funding and staff resources that will be required in future fiscal years will be comparable to our projected FY 1997 levels.

Question. Under which FDA activity or activities is the funding for tobacco regulation included? Please provide a breakdown of funding and staff years under each activity.

Answer. In terms of our past efforts, for FY 1994, we used about 19 FTEs and \$1.3 million. In FY 1995, we expended about 27 FTEs and \$3.5 million. For FY 1996, we anticipate an increase, in dollars, of about 10 percent, and about the same level of FTEs as compared with FY 1995. These resources have come largely from the Program Management activity under the Office of the Commissioner, including the Immediate Office of the Commissioner and Office of the Chief Counsel, the Office of Management and Systems, the Office of Policy, the Office of External Affairs, and the Office of Operations, including the Immediate Office of the Deputy Commissioner.

As noted, we have not yet determined what our resource requirements will be for FY 1997. We have generated a rough estimate of the cost of implementing and enforcing the proposed rule. In an effort to be as responsive as possible, but recognizing the uncertainty in working from a proposed rather than a final rule, we estimate that between 30 and 50 FTEs would be needed to implement the rule as proposed, which is about 0.5 percent of our workforce.

MEDICAL DEVICE APPROVALS

Question. The budget justification indicates that, as directed by the Committee, for FY 1996, the FDA is maintaining the medical device review FTEs at the FY 1995 FTE level. The justification indicates that 609 FTEs were committed to the device evaluation program in FY 1995. However, it also indicates that although it has insulated the device review FTEs from budget cuts, the device program overall took budget reductions in fiscal years 1996 and 1997. What were the reductions in funding for the overall device program in each of fiscal years 1996 and 1997, as compared with fiscal year 1995?

Answer. I would be happy to provide a table showing the funding reductions for the overall device program for the record.

[The information follows:]

Medical Device and Radiological Health Program Totals (Excludes MQSA and MDUFA User Fee Funding)						
	FY 95	FY 96	Difference between 95/96	FY 97	Difference between 96/97	Difference between 95/97
Program FTEs	1,831	1,820	-11	1,771	-49	-60
Program Dollars* (000)	\$157,021	\$156,679	-\$342	\$156,679	None	-\$342

*Includes payroll and operating costs.

Question. How is FDA able to maintain the same level of FTE positions for device approvals in FY 96 as in FY 95 with reduced funding for the program?

Answer. FDA cut FTEs from non-product evaluation program activities to help meet the goals of getting new devices to the market as quickly as possible, without sacrificing safety and efficacy.

Question. In its report accompanying the FY 1996 appropriations Act, the Committee strongly encouraged FDA to increase resources for device products approvals from lower priority areas. Has FDA re-directed resources to the device approval area? If not, why? If so, from which activities has FDA re-directed resources? Indicate the total amount of funding and number of staff resources which have been transferred. If resources can be spared from these other areas, why can't the transfers be made permanent?

Answer. Yes, in FY 1996 FDA maintained the FTE and funding levels for the medical device product evaluation project area. FDA cut FTEs and funding from non-MQSA-related surveillance and enforcement, risk assessment, and education and assistance activities. In spite of overall program and FDA budget reductions, FDA protected product evaluation FTEs in FY 1996. The projected FTE use for the product evaluation area is 609. For FY 1996, FDA cut eight FTEs and \$240,000 from surveillance and enforcement activities, 2 FTEs and \$62,000 from risk assessment activities, and 1 FTE and \$40,000 from education and assistance activities. For FY 1997, FDA estimates an additional reduction from FY 1996 levels of 36 FTEs from surveillance and enforcement, 9 FTEs from risk assessment and 4 FTEs from education and assistance activities. The dollars are estimated to remain at FY 1996 levels for these three activities, resulting in a funding decrease when inflation costs are factored in.

In some cases these transfers can become permanent. However, the protection of product evaluation resources comes at a price to other important programs. Reduction in the adverse event reporting program or FDA's efforts to improve the quality and safety with which devices are manufactured and marketed can cause potential harm to the American public's health. All aspects of the medical device and radiological health program will need to be carefully watched to ensure that FDA's capabilities to detect and eliminate serious threats to the public health remain intact.

Question. Please provide for the record, for each of fiscal years 1990 through 1996 and proposed for FY 1997 (excluding collections from the new medical device user fee proposal), the number of FTE and funding allocated for the device program, and a further breakdown of the funding within the overall program (amount and FTEs) allocated for each component of the program (e.g., device evaluation, compliance, postmarket assurance, science base activities, and international harmonization). Also, for device evaluation, provide a further breakdown for each of these years of the resources -- FTEs and funding -- for 510(k) and PMA evaluations.

Answer. I would be happy to provide the information for the record on FTE and funding data. Table one lists the FTE and funding expenditures for the Medical Device and Radiological Health Program for FYs 1990 through 1997, distributed according to the Project Management System categories shown in the President's budget. These categories include: Surveillance and Enforcement, Product Evaluation, Risk Assessment, and Education and Assistance. The second table shows the FTEs and funding expended by the Center for Devices and Radiological Health (CDRH) on the medical device and radiological health program in FYs 1993 through 1995 by the following strategic areas: Device Evaluation, Compliance, Postmarket Assurance, Science-base Activities, and International Harmonization. This information was collected under a special time reporting process undertaken in CDRH, and does not include resources from other organizational components within FDA. Comparable data is not available prior to FY 1993. The third table provides a further breakdown for CDRH FTEs and funding for the 510(k) and PMA programs for FYs 1990 through 1997.

[The information follows:]

Table 1
Medical Device and Radiological Health Programs
FTEs and Funding

	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996*</u>	<u>1997**</u>
	FTEs \$000	FTEs \$000	FTEs \$000	FTEs \$000	FTEs \$000	FTEs \$000	FTEs \$000	FTEs \$000
Surveillance and Enforcement	657 44,078	732 51,718	812 57,480	883 64,165	930 87,581	899 73,550	926 86,290	890 86,693
Product Evaluation	370 24,824	415 29,432	449 32,921	459 36,494	590 44,344	609 52,159	609 52,159	609 52,159
Risk Assessment	145 9,728	157 11,033	157 12,699	156 13,132	183 16,939	220 19,031	218 18,969	209 18,969
Education and Assistance	160 10,735	178 12,595	186 13,631	185 15,234	96 10,495	103 12,301	102 12,261	98 12,261
Total	1,332 89,365	1,482 104,778	1,604 116,731	1,683 129,025	1,799 159,359	1,831 157,021	1,855 169,679	1,806 170,082

Table 2

CDRH FTEs and Funding by Strategic Area*

	1993		1994		1995	
	FTEs	\$000	FTEs	\$000	FTEs	\$000
Device Evaluation	423	30,855	490	38,782	495	40,444
Compliance	281	24,014	192	23,269	201	21,544
Postmarket Assurance	107	9,071	183	15,639	182	16,201
Science-base Activities	140	16,159	152	15,694	192	18,076
International Harmonization	31	2,244	39	2,944	37	3,076
Total	982	82,343	1,056	96,328	1,107	99,341

*The breakdown by strategic area was collected in CDRH under a special time reporting process. The data do not include resources from other organizational components within FDA.

Table 3

CDRH 510(k) and PMA Program FTEs and Funding

	1990		1991		1992		1993		1994		1995		1996**		1997**	
	FTEs	\$000	FTEs	\$000	FTEs	\$000	FTEs	\$000	FTEs	\$000	FTEs	\$000	FTEs	\$000	FTEs	\$000
510(k)	120	8,055	131	8,913	126	8,992	140	10,172	186	14,560	211	16,994	186	15,864	176	15,292
PMA*	81	5,580	88	6,131	86	6,268	80	6,113	87	7,554	79	7,206	89	8,193	99	9,003

*PMA Originals

**Estimates

Question. In the report accompanying the FY 96 appropriations bill, the Committee directed FDA to submit quarterly reports detailing the specific measures being taken, the level of resources provided, and the progress FDA is making on device review times. FDA submitted the first quarterly report to the Committee last week. In that report, FDA notes that in FY 1995, 495 FTE were spent on device review. How does this 495 FTE level comport with the 609 FTE level for FY 1995 for the device evaluation program cited on page 28 of the justification?

Answer. The level of 609 FTEs includes the entire device review program which includes FTEs for the Center for Devices and Radiological Health (CDRH), the Office of Regulatory Affairs (ORA) and the Office of the Commissioner (OC). The 495 level is the number of FTEs used only in CDRH during FY 1995 for product evaluation-related activities. These include activities such as review of premarket notifications (510(k)) and supplements, Investigational Device Exemptions (IDE) including amendments and supplements, premarket approval applications (PMA) including amendments and supplements; petitions; bioresearch monitoring; premarket regulation/policy development; premarket manufacturers' assistance; and premarket liaison/support functions. The FTEs in ORA are used primarily to conduct preapproval inspections for class III products entering the market under the PMA and 510(k) processes.

Question. The report indicates that for FY 1996, FDA has shifted FTEs from 510(k) review to PMA review to help reduce the PMA backlog. How many employees (FTEs) has FDA shifted?

Answer. We shifted a total of 25 FTEs from 510(k) review to other application types during the first half of FY 1996. These reprogrammings included 10 FTEs to PMA review, 5 to PMA supplement review, 5 to IDE review, and 5 to IDE supplement review.

Question. How long will these employees will be working on PMA reviews?

Answer. Because agency reclassification initiatives and the third party 510(k) review pilot project have reduced the amount of resources required for 510(k) reviews, these employees will be able to work with the PMA and IDE applications indefinitely, as needed.

Question. The quarterly report states that "exempting more of the easiest-to-review 510(k)s and shifting resources from 510(k)s to PMA review may increase 510(k) review times." Could you explain this in more detail? What will be the resulting increase in 510(k) review times? Exactly what level of resources--funding and staff--will be transferred? Do you plan to take any additional resources that might be released from the "down-classification" of devices and put them into PMA reviews?

Answer. It is true that if the simpler class I and class II devices are exempt from 510(k) review, the remaining 510(k)s will be more complex and time-consuming to review. However, FDA is committed to improving 510(k) performance. FDA showed improved review performance in FY 1995, and will continue to maintain a strong performance level in the 510(k) program in FYs 1996 and 1997 to ensure that the backlog does not recur.

In FY 1995, we were pleased to report a reduction in the average review time for a 510(k), by more than 26 percent, from 184 days in FY 1994 to 137 days in FY 1995. The average review time was further reduced to 115 days in the first six months of FY 1996. The impact of increasing complexity of 510(k)s on review times cannot be determined at this time, but FDA will not give up the productivity gains made during the past year. During the first half of FY 1996, FDA transferred 25 FTEs out of the 510(k) program and into the PMA and IDE review areas to improve review performance for these application types. Although FTEs were moved from the 510(k) program, FDA will continue to monitor 510(k) performance levels to ensure that the backlog does not recur.

In FY 1996, FDA shifted a total of 10 FTEs from 510(k) review to PMA review and a total of five FTEs to the PMA supplement program. This change, coupled with new management initiatives, will help FDA speed the availability of safe and effective new devices to the American public. FDA plans to reallocate 10 more FTEs from 510(k) review to PMA review in FY 1997.

Question. FDA is required by law to review PMA products in 180 days. I note that one of FDA's performance goals is "completing first cycle PMA reviews within 180 days." Please explain how "first cycle review" differs from taking final action on an application.

Answer. A PMA generally goes through more than one cycle prior to approval and these cycles are a result of the stopping and re-starting of the "review clock." There are a number of scenarios under which the "review clock" is stopped and re-started. Depending on the action causing the clock to be stopped, the "downtime" accrues to either FDA or the applicant. However, even in the situation in which the clock is stopped and reset to zero, to determine if an application review is overdue, we report total elapsed time from submission to report date for internal monitoring and workload reporting purposes. I would like to provide some additional explanation for the record.

[The information follows:]

Ways in which the review clock is set during the review process follow:

Scenario #1: The clock for FDA remains running if the agency transmits to the applicant:

1. a Filing Letter, meaning that an incoming application has been triaged for completeness and found acceptable for review.

2. a Minor Scientific Deficiency, meaning that an omission or lack of clarity of data is correctable by the applicant with minimal effort.

Scenario #2: The clock is stopped and the cycle is ended for FDA--that is, suspended at the day an event occurs until the next applicant action--when FDA:

1. issues an Approvable Letter, indicating that an applicant has satisfactorily met all substantive premarketing requirements, but formal approval requires a final action by the manufacturer, such as labeling revisions.
2. grants a request by the applicant to have his/her submission placed in a "hold" status, typically to await additional data.

Scenario #3: The clock is reset and a new cycle started--that is, re-started from "day 1"--for FDA if the following occurs:

1. FDA issues a Not Filing Letter, informing the applicant that the submission, as presented to the agency, has been judged to be incomplete or otherwise deficient and that agency review is not merited.
2. FDA issues a Major Deficiency Letter, indicating that upon review, the agency finds the supporting information to be inadequate, unclear or otherwise unable to demonstrate safety and effectiveness.
3. FDA receives an Unsolicited Major Amendment, which has such a significant bearing on the scientific, technical or clinical aspects of a device that the agency may conclude that the company is essentially starting over--that is, seeking new or expanded claims, changing its method or site, etc.
4. FDA issues a Not Approvable Letter, which notifies an applicant that his/her submission has, upon review, been found not to merit market approval.

Scenario #4: The clock is ended and the cycle considered completed if:

1. FDA transmits an Approval Order to the applicant authorizing product marketing.
2. FDA issues a Denial Order to the applicant, meaning that the application has been found to be without any basis to proceed in development.

3. the applicant requests a withdrawal of the pending PMA from FDA consideration.
4. after several months, a deficient application is deemed abandoned and the applicant does not respond to an agency notice that it will be removed from the review queue.

PMA "REVIEW CLOCK" EXAMPLE

1. Assume a PMA is submitted and at day 42 of the review process a filing letter is issued. FDA would have accumulated 42 days at that point. Since the filing letter has no effect on the FDA clock, days continue to accumulate.
2. At day 170, FDA issues a major deficiency letter. This puts the clock on hold for FDA.
3. Assume it took the applicant 150 days to respond to the letter. The applicant's clock at 150 days is reset to 0 days upon submission of the response and FDA's clock at 170 days is reset to 0 days.
4. FDA issues a minor deficiency letter 50 days after the response to the major deficiency letter was received. Time continues to accumulate for FDA until another action affecting the clock is taken. The applicant responds 20 days later. The applicant has accumulated no days and FDA is now at 70 days.
5. After an advisory panel meeting, FDA issues a not approvable letter at day 120. The applicant's clock accumulates until submission of the response at which point it is reset to 0 days (assume a 60-day response time) and FDA's clock at 120 days is reset to 0 days.
6. FDA issues an approvable letter at day 25 after receiving the response to the not approvable letter. This stops the FDA clock at 25 days and begins accumulating time on the applicant's clock.
7. If it takes the applicant 10 days to respond, he/she has a total of 10 days on their clock; the response causes the FDA clock to resume incrementing up from 25 days.
8. Assuming the applicant has not been ready for a manufacturing facility inspection, FDA would issue an approvable letter pending the outcome of the inspection which is necessary prior to PMA approval (assume this takes 5 days). This action stops FDA's clock and starts accumulating time on the applicant's clock (assume it takes 180 days to respond).
9. Upon notification of this compliance, FDA would issue an approval order.
10. Issuance of the approval order stops both clocks: FDA's at 30 days and the applicant's at 190 days.

Had the clock not been allowed to reset, all increments of time from receipt of the PMA would be counted: FDA's at 320 days and the applicant's at 400 days.

Question. How many of these "cycles" does a PMA application go through before it receives final FDA approval?

Answer. A PMA completes approximately two cycles before it receives final FDA approval.

Question. What is a realistic goal for the average review time for a PMA product, not "review cycles" but from the time FDA receives an application until the time a final decision is made?

Answer. The average time it took FDA to review a PMA, from filing date to date of approval or denial decreased from 649 days in FY 1994 to 606 days in FY 1995. I would like to provide, for the record, a table showing additional PMA review performance information.

[The information follows:]

Performance Levels for PMAs: FY 90 - FY 96

Fiscal Year (FY)	Number of Applications Received	Number of Approvals ²	Average FDA Approval Time (in days) ³
FY 90	79	47	302
FY 91	75	27	335
FY 92	65	12	236
FY 93	40	24	547
FY 94	43	26	649
FY 95	39	27	606
FY 96 ¹	19	19	631

¹ Data through second quarter of FY 1996.

² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of approvals issued during each fiscal year.

³ Includes all increments of time a PMA was under review by FDA from the filing date until approval or denial. Under the average approval time, the review clock is not reset upon the receipt of a "major amendment."

Question. Is the statutory review time for PMA reviews realistic? Even with the additional resources you propose through a medical device user fee, is it

feasible for FDA to review PMA products within the statutory time frame of 180 days?

Answer. Pursuant to 21 CFR section 814.40, FDA is required to review the PMA and notify the applicant of its findings within 180 days after receipt of a PMA that is accepted for filing and to which the applicant does not submit a major amendment. FDA expects to complete 53 percent of the first cycle PMA reviews within 180 days in FY 1996 compared to 45 percent in FY 1995. Because of projected increased workload, FDA estimates that 45 percent of first cycle reviews will be completed within 180 days for FY 1997. If user fee legislation has been enacted, FDA estimates that 75 percent of first cycle reviews will be completed within 180 days in FY 1997. This percentage would increase in successive years until it reached 90.

PMA review times have been improving because of a number of initiatives. The first is a more than 50 percent reduction -- from about 600 days in FY 1994 to about 250 days in FY 1995 -- in the time taken to reach a final decision on a PMA after receiving an evaluation from an advisory panel. This includes completing the review process, finalizing the labeling, and inspecting the manufacturing facility for good manufacturing practices (GMPs). Second, we have more frequent meetings with firms both prior to submitting a PMA and afterwards. Third, we have established a project management initiative for PMAs in two device review divisions which enables FDA to prospectively plan, organize, and manage work to better use review resources and increase timeliness. Finally, we have shifted FTEs from 510(k) review to PMA review in FY 1996 to reduce the PMA backlog. However, FDA will not be able to meet the statutory review time without additional resources. One reason for this is the expected increase in PMA review workload in FY 1997 due to reclassification activities and calls for premarket approval applications for pre-amendments devices. These additional PMAs will add to the expected number of PMAs still pending at the end of FY 1997. For the record, I would like to provide a table summarizing PMA performance goals for FY 1996 and FY 1997, with and without user fees.

[The information follows:]

CDRH PREMARKET REVIEW PERFORMANCE

Fiscal Year	510(k)					PMA			
	Re- ceived	Acted On	End Of Year Pending	Final Action Within 90 FDA Days	First Action Within 90 FDA Days	Re- ceived	Acted On	End Of Year Pend- ing	First Action Within 180 FDA Days
1995 actual	6,056	7,980	2,450	50%	81%	39	53	125	45%
1996 Pres Budget estimate	5,875*	6,300	2,025	60%	90%	45	60	110	53%
1997 Pres Budget estimate (with '96 resources)	5,700*	5,845	1,880	68%	90%	65	60	115	45%
1997 Pres Budget estimate (with User Fees)	5,700*	6,125	1,600	90%	99%	65	100	75	75%
1997 Projected Agency Impact of 5% funding cut	5,700*	5,568	2,157	63%	85%	65	55	120	40%

* Within the last 15 months, 273 categories of the simplest Tier 1 products were exempted from submitting 510(k)s, bringing the total of device types exempt from premarket notification to 572.

ANIMAL DRUG APPROVALS

Question. Dr. Kessler, last year I asked you about the delays in the approval of animal drugs. You have reported to the Committee the progress that FDA is making on drug and device approvals, and the fact that you are now working to eliminate the backlog of food color and additive petitions. What progress is FDA making to expedite the animal drug approval process?

Answer. For several years now, we have been developing and implementing procedures for reviewing data and information for future new animal drug applications while the animal drug product is still under development. This is known as the "Phased Review" policy. It improves the efficiency of the review process primarily because it allows review of parts of a future application before other parts have been completed by the sponsor. It also provides greater opportunity for discussion of studies between reviewers and the sponsor as the studies are being planned and carried out. We believe that phased review moves the review process to earlier stages of the drug development process, and provides a more interactive process that leads to earlier identification and resolution of issues, and ultimately to a more efficient approval process.

In conjunction with phased review, we have also initiated a process called "Direct Review." This policy allows individual review divisions to correspond directly with a sponsor regarding specific issues in a submission relevant to their specialty area. Previously, all reviewers had to complete their part of a submission before a single correspondence was prepared and sent to the sponsor. As with phased review, this process provides earlier communication between the reviewer and the sponsor so that issues may be addressed and resolved as they arise.

In addition, FDA has also encouraged pre-submission conferences, to discuss requirements and identify issues that may need to be addressed. FDA has encouraged submission of protocols and has promised to commit to agreements regarding protocols in order to eliminate what industry characterizes as the "moving target" phenomenon. We have developed a program for sponsor-monitor method trials, which allows us to use resources for other programs that were formerly reserved for method trials.

Finally, over the last several years, we have devoted renewed energy to update our regulations and guidelines. This provides a great value in improving the approval process through accurate, complete, and timely communication between the Center and potential sponsors and applicants. It reduces mis-information and outdated information, and leads directly to applications and related submissions of better quality and with fewer errors and misconceptions. This results in fewer iterations or "cycles" in the review process and in shorter approval times. From the feedback received from sponsors, these programs have been and are being well-received.

OVERALL FY 1997 APPROPRIATIONS REQUEST

Question. The FDA is not requesting an increase in appropriations for FY 1997 above the FY 1996 level, except for additional authorized user fee collections. What is the total level of funding required for pay and mandatory

cost increases which FDA will be required to absorb in FY 1997, excluding collections from new unauthorized user fee proposals? What reductions are being proposed to offset these mandatory cost requirements, including the reductions which will be required if the proposed medical device and import inspection fees are not approved by the Congress? Please indicate specific amount of the reduction by activity.

Answer. In FY 1997, FDA will absorb estimated increases of \$33,430,000, of which \$23,258,000 is attributed to pay increases and \$10,172,000 to operating cost increases. The Agency is continuing to absorb reductions by application of cost cutting approaches such as: the Reinventing Administrative Management Program (RAMP) to achieve additional efficiencies in FDA management and administrative structures; by studying in depth existing supervisory ratios and expanding the ratios where possible; by detailed analysis of administrative support staff roles and functions; by starting Total Quality Management programs throughout the agency to work towards elimination of redundant work steps or processes. The approximate reduction proposed to be shared by each program is as follows: Foods \$9,161,000; Human Drugs \$8,954,000; Biologics \$3,679,000; Animal Drugs \$1,698,000; Medical Devices \$6,243,000; NCTR \$2,084,000; Program Management \$1,353,000 and Buildings and Facilities \$258,000.

Question. The FY 1997 budget indicates that FDA will meet the requirements of the Prescription Drug User Fee Act by adding an additional 203 full-time equivalent positions to enhance drug approvals. These positions will be financed through increased collections from authorized user fees. FDA again proposes to fully offset these user-fee financed position increases through an equivalent reduction in FTE positions in the non-user fee areas of FDA's budget. Do you believe this is appropriate? Those paying user fees are to be given enhanced levels of services in return. Why should these staff increases wholly financed through nonfederal funds received by the agency be at the expense of the non user fee financed areas of FDA's budget? Indicate the specific impact of the FTE reductions proposed on these non user-fee supported FDA activities.

Answer. In an era of declining appropriated funding levels and reduced FTE levels, the 203 FTE reduction will be shared by all FDA programs, both user-fee supported and non user-fee supported. The FTE reductions by the individual programs are in support of the President's initiative to reduce the deficit by streamlining Federal employment. Therefore, the reductions are not meant to be at the expense of any program, but rather shared by the entire agency. For FY 1997 the proposed FTE reductions are as follows: Foods 68 FTE, Human Drugs 39 FTE, Biologics 17 FTE, Animal Drugs 12 FTE, Medical Devices 49 FTE, NCTR 6 FTE and Program Management 12 FTE.

REPROGRAMMING FUNDS

Question. I note that FDA has submitted no requests to the Subcommittee to reprogram appropriated funds. What is FDA's understanding of the Committee's

reprogramming requirements? What internal guidance does the agency's budget office provide on this?

Answer. FDA has made every effort to follow the reprogramming requirements as offered by the Subcommittee. It is FDA's understanding that any significant departures -- approximately seven percent or more -- from plans outlined in the congressional justifications by program are to be submitted to the Subcommittee as proposed reprogrammings. The Department periodically provides guidelines for reprogramming, as contained in the report titled "Guidelines for Reprogramming Within the Department of Health and Human Services requested in Senate Report 102-397."

PESTICIDE DATA COLLECTION

Question. I note from the justification that the FDA has conducted studies that indicate pesticide residue levels are generally well within established residue tolerances -- one study was done on pesticide residues in pears and tomatoes and the other done as part of the Total Diet Study. USDA has requested additional funding for a number of post harvest pesticide and expanded pesticide use data collection and analysis initiatives. In certain cases, it indicates that the information has been requested by other federal agencies, such as the EPA and FDA. What additional data has the FDA requested the U.S. Department of Agriculture to collect and analyze? How do the pesticide residue studies being conducted by the FDA differ from those being undertaken by the USDA?

Answer. FDA and the United States Department of Agriculture (USDA) are both responsible for monitoring foods for pesticide residues and enforcing residue tolerances which are established by the Environmental Protection Agency (EPA). USDA's Food Safety and Inspection Service (FSIS) enforces pesticide residue tolerances for meats, poultry and certain egg products and FDA enforces tolerances for all other domestic and imported foods.

Since 1990, USDA has also conducted a program known as the Pesticide Data Program (PDP). Under the PDP, several USDA agencies perform various pesticide related activities aimed at gathering information on domestic usage and on pesticide residues in foods. USDA's Agricultural Marketing Service (AMS) is the lead USDA agency for the PDP. In addition, the Economic Research Service (ERS) and the National Agricultural Statistics Service (NASS) participate in the PDP. AMS, through contracts with State laboratories, collects and analyzes selected non-meat foods for pesticide residues. The NASS collects information on pesticide usage on various crops grown throughout the US. ERS evaluates various economic factors associated with pesticide usage and residues in foods.

The pesticide residue data generated by States under the auspices of AMS are collected in a manner that permits statistically reliable inferences to be made about pesticide residue levels in US foods. As such, the data are useful to EPA in its pesticide risk assessment activities. EPA is the primary "customer" for PDP residue data and the specific foods and pesticides analyzed through the AMS activity are requested and approved by EPA according to that agency's needs for such residue data. FDA, in contrast, does not specifically request that AMS

generate pesticide residue data to satisfy any FDA data needs. Instead, FDA is notified by AMS in situations where the PDP data indicate a possible (presumptive) violation of EPA's pesticide residue tolerances. As the primary enforcement agency, FDA may then elect to collect and analyze follow up enforcement samples to further document the apparent violation and take any necessary action.

Similarly, FDA uses, but does not specifically guide acquisition of, the pesticide usage data gathered by the NASS to better direct FDA's domestic residue monitoring activities. The NASS usage surveys are not performed according to any FDA request or direction. Nonetheless, the domestic usage data are useful in determining which crops have been treated with particular pesticides and therefore, which crops/commodities are more likely to contain pesticide residues. Such usage data are generally more useful to FDA than are the residue data generated by the PDP.

USDA's PDP pesticide residue monitoring activity is conducted primarily for selected domestic foods to gather statistically reliable residue data for EPA's risk assessments for pesticides. Information on possible violations of tolerances are coincidental to the primary purpose of PDP. FDA's pesticide program, on the other hand, is primarily oriented toward enforcement for a wide variety of domestic and imported foods. Information on overall pesticide exposure which assists EPA's risk assessments is an important, but secondary, byproduct of FDA enforcement monitoring. The FDA Total Diet Study serves as a final check on the effectiveness of the agency's enforcement efforts.

RENTAL PAYMENTS TO GSA

Question. The fiscal year 1997 request proposes to maintain the fiscal year 1996 level of funding of \$46,294,000 for rental payments to the General Services Administration (GSA). The FDA budget justification indicates that this request does not include the costs of special services for which FDA must pay GSA on a reimbursable fee for-service basis (e.g., special guard services, around-the-clock heating, and air conditioning where required). What is the current cost of these special services to the FDA and what is requested for such services for fiscal year 1997?

Answer. I would be happy to provide the information for the record:
[The information follows:]

The cost of these special services is as follows:

	<u>1995</u>	<u>1996</u>	<u>1997</u>
	\$16,958,673 <u>1/</u>	\$17,824,665 <u>2/</u>	\$17,844,652 <u>2/</u>
<u>1/</u>	Includes \$1,018,000 for 1-time security upgrades for Parklawn Building due to Oklahoma City bombing.		
<u>2/</u>	Estimate includes increase to cover the cost of new operation and maintenance contract, increased security (due to Oklahoma City bombing) and increase in utilities.		

Question. What was the cost of these special services for FY 1995 and what is estimated for FY 1996?

Answer. In FY 1995, \$16,958,673 was the cost of these special services. It is estimated that in FY 1996, the cost will be \$17,824,665.

Question. Where is this funding included in FDA's budget?

Answer. It is included on pages 36 and 37 of FDA's FY 1997 Budget Justification, Salaries and Expenses, distribution of resources.

Question. Please indicate amount included under each activity shown on the FDA distribution of resources table on pages 36-37 of the budget justification.

Answer. I would be happy to provide the information for the record.
[The information follows:]

Cost of Special Services paid to GSA	Actual Total FDA FY 1995	Estimate Total FDA FY 1996	Estimate Total FDA FY 1997
Food Safety & Cosmetics	\$4,220,128	\$4,861,539	\$4,938,054
Human Drugs	3,146,931	3,247,545	3,348,049
Biologics	2,939,268	2,987,771	3,100,778
Animal Drugs & Feeds	414,278	402,071	415,865
Medical & Radiological Devices	2,949,609	2,927,034	2,553,838
Program Management	3,288,459	3,398,704	3,488,067
Total	\$16,958,673	\$17,824,665	\$17,844,652

Question. The budget justification indicates that payments under the fiscal year 1996 rental payments to GSA appropriation will be reduced by \$3,994,000 to cover FDA Building Delegation expenses and payments and that the FY 1997 appropriation for this account will be likewise reduced. Does this represent a savings in this account in each of these years?

Answer. No, the reduction in FDA's Rental Payment appropriation for FDA's building delegations does not represent a savings in the GSA rental account. The funds are reappropriated from FDA's one year appropriation -- Rental Payments to GSA -- to FDA's no-year appropriation -- Rental Payments-Delegated Buildings. This is consistent with section 611 of P.L. 104-52 which authorizes FDA to retain that portion of the GSA rental payment available for operation, maintenance or repair of the building or facility as determined by the Administrator of GSA, and expend such funds directly for the operation, maintenance or repair of the building or facility under our delegation by GSA.

Question. What is FDA's Building Delegation authority?

Answer. FDA's building delegation authority is granted through an interagency agreement between GSA and FDA under which funds are allocated by GSA, authorized by the Treasury, Postal Service, and General Government Appropriation Act, 1996, P.L. 104-52, section 611 to FDA for rental payments to the lessors and to provide a range of real property management and operational services within a building(s) as specified within the Federal Property and Administrative services Act, 40 U.S.C. 486 (1982). The buildings delegated by GSA under FDA's GSA's building delegation program are the Crawford Building in Atlanta, Georgia; 12709, 12720 and 12721 Twinbrook Parkway and 1901 Chapman Avenue in Rockville, Maryland; Federal Building #8 at 200 C Street, Washington, D.C., 7500 and 7520 Standish Place, Gaithersburg, Maryland. The \$3,994,000 provided by GSA for these delegated facilities only covers the recurring services within a normal eight hour day that GSA would normally cover in the rent charges. Any recurring reimbursable services provided by GSA over and above the normal eight hour day are paid by FDA out of our S&E appropriation as identified in the chart above.

Question. What are FDA's total Building Delegation expenses and payments for each of Fiscal Years 1995 and 1996 and proposed for FY 1997? Are these expenses funded through the "rental payments" appropriation? If not, please indicate out of which activities, as reflected on the FDA distribution of resources table in the budget justification, these expenses were taken in each of fiscal years 1995 and 1996, and how much is proposed for FY 1997. For each of these years, indicate in what amount and for what purpose FDA has or will allocate funds under its Building Delegation authority.

Answer. The \$3,994,000 provided by GSA for these delegated facilities only covers the recurring services within a normal eight hour day that GSA would normally cover in the rent charges. Any recurring reimbursable services

provided by GSA over and above the normal eight hour day are paid by FDA out of the S&E appropriation. FDA funds from our S&E appropriation in the amount of \$3,580,000 were allocated in FY 1995 to maintain and operate the buildings delegated to FDA by GSA. This included such services as operation and maintenance contract, security guards, HVAC, cleaning, trash pick-up, and other miscellaneous building maintenance and operation services contracts. The current estimate for FY 1996 and FY 1997 is \$4,612,000 each year. I would be happy to provide the information for the record:

[The information follows:]

Building Delegation Expenses:

	1995 <u>Actual</u>	1996 <u>Estimate</u>	1997 <u>Estimate</u>
GSA funds	\$3,970,000	\$3,994,000	\$4,074,000
FDA funds	3,580,000	4,612,000*	4,612,000*
Certification Offset	<u>(107,000)</u>	<u>(136,000)</u>	<u>(140,000)</u>
Total	\$7,550,000	\$8,568,000	\$8,686,000

*Increase due to new contract for operation and maintenance, increased security due to Oklahoma City bombing and increase in utilities costs.

The Building Delegation expenses are not funded directly out of the Rental Payments to GSA appropriation. GSA authorizes funds for the operation and maintenance support for FDA delegated buildings in P.L. 104-52, section 611 and FDA reappropriates the funds identified by GSA from our Rental Payment appropriation to the Rental Payment-Delegated Buildings appropriation. The expenses are paid from this appropriation to cover (as stated above) recurring services within a standard eight hour day.

FDA funds the costs to operate and maintain the delegated buildings over and above the 8 hours a day that GSA funds. FDA funds are within the S&E appropriation represented on page 36 and 37 as stated above.

FDA has a marginal amount offset by our certification program located in space at Federal Building #8. The certification program, a fee for service program, is charged a pro rata share of the cost to maintain and operate FB#8 based on the square footage the program staff occupy.

Question. The budget justification indicates that actual rental charges "exceed the requested amounts, but are capped by Congress". This Committee has not "capped" rental payments, but simply approved the President's budget request each year for the FDA "rental payments" account. What are the actual rental charges for each of fiscal years 1995, 1996, and 1997. Why doesn't the

President's budget request a sufficient amount to cover FDA's actual rental charges?

Answer. Beginning in FY 1988, the Congress initiated the practice of limiting the amount of annual rent paid by FDA to GSA. This practice continues to safeguard FDA from increases in the GSA rent charges, by allowing FDA to pay only a portion of the annual rent billed to FDA by GSA. FDA's budget estimates for the GSA rent bill in the budget year are based on GSA's current rent rate for FDA's current space requirements, with an allowance made using the GSA inflation factor and adjustments for projected space increases or decreases. FDA has no influence or control, however, over how GSA sets the current space rates. The President's budget request is for an amount less than the actual GSA rent bill. If FDA is no longer allowed this credit in the amount that exceeds the actual GSA rent bill, less the building delegation amount, FDA will have to divert further critical program resources to pay the rental charges.

Question. Which FDA activity or other agency is absorbing the difference between the FDA request for rental payments and the actual rental charges?

Answer. GSA absorbs the difference by providing FDA the credit described above.

Question. P.L. 104-19 provided \$5 million from the GSA federal buildings fund for implementation of an "agreement between the FDA and another entity for space, equipment, and facilities related to seafood research" at the Christopher Columbus Center of Marine Research and Exploration in Baltimore, MD. Please explain what agreement has been entered into by FDA pursuant to this statutory provision; what FDA's expenses will be; how these expenses will be funded; and where this funding is included in FDA's budget.

Answer. On March 28, 1996, FDA and the Christopher Columbus Center entered into a Letter of Agreement pursuant to this statutory provision.

FDA has requested a delegation of lease authority and transfer of the \$5 million from the General Services Administration to implement this Letter of Agreement. GSA has verbally stated that we will receive both. Consequently, FDA and Columbus Center have begun lease negotiations which will result in FDA occupying 20,000 square feet in Columbus Center. We anticipate that a lease agreement will be signed within the next four months; that space will be designated and fitted out for FDA's needs; and, that FDA will have twenty-four people from seafood safety and toxins research located in Columbus Center in 1997.

Of the \$5 million we anticipate being transferred by GSA, the major part will be used for fitting out the designated space, purchasing equipment, and paying the first year's lease cost in 1997. Therefore, no FDA funding for FY 1997 will be used for this purpose. For 1998 and the remaining years the lease is in effect, FDA will need to request additional funds to pay for the lease costs under the terms of the lease agreement. We anticipate the amount will be \$600,000 per

year for nineteen years. This will be included in the Salaries and Expenses portion of FDA's budget submission.

Question. How does FDA pay the cost of space expansions when it does not request increased funds for its "rental payments to the GSA" to cover the costs of additional space?

Answer. Costs incurred by FDA for space expansion(s) are covered under FDA's Rental Payment appropriation to GSA.

Question. Please provide specific information on what additional costs for space expansions have been done by the FDA and where (i.e., in the distribution of resources by FDA activity) FDA is covering these costs.

Answer. FY 1993 is the only year GSA has charged FDA above the Rental payment appropriation. GSA charged FDA \$454,000 for the rent cost for additional space. For FY 1997, FDA costs are included in the budget on pages 36 and 37 of FDA's distribution of resources table.

BUILDINGS AND FACILITIES

Question. The justification indicates that the \$8.350 million request for the FDA buildings and facilities account is the minimal amount required. Please provide for the record, in priority order, a list of all unfunded facilities' maintenance, repair and improvement projects, a brief description of each project, and the funding required for the project.

Answer. I would be happy to provide that information for the record:
[The information follows:]

BUILDINGS AND FACILITIES

No Headquarters Consolidation

PROJECT BACKLOG - May 1996

1. CFSAN, Beltsville, MD: Module 1, Renovations of laboratories to suit OSHA and program requirements and modifications to permit carcinogen work and miscellaneous repairs and improvements.....\$4,000,000
2. CBER, Bethesda, MD: Retrofit laboratories and modernize space in Buildings 29 and 29A\$16,830,000
3. ORA, Los Angeles (Orange County), CA: Construction of new district office and laboratory facility.....\$37,500,000
4. NCTR, Jefferson, AR: Construction of laboratory space and support facilities for the Office of Regulatory Affairs.....\$37,000,000

5. ORA, Nationwide: Miscellaneous repairs and improvements (multiple years).....\$10,450,000
6. NCTR, Jefferson, AR: Miscellaneous repairs and improvements (multiple years).....\$9,735,000
7. NCTR, Jefferson, AR: Building 14 - Major building renovation to provide for new laboratories.....\$7,425,000
8. NCTR, Jefferson, AR: Construction of new animal quarantine and support facility; construction of new storage facility for animal bedding, cages, rack, and miscellaneous hardware.....\$3,520,000
9. ORA, San Juan, PR: Laboratory expansion.....\$3,300,000
10. ORA, Jamaica (Queens), NY: Laboratory casework and fume hoods.....\$8,000,000
11. ORA, Atlanta, GA: Laboratory casework for laboratory expansion.....\$2,200,000
12. NCTR, Jefferson, AR: Miscellaneous building repairs to eliminate safety and environmental problems.....\$3,355,000
13. CFSAN, Dauphin Island, AL: Miscellaneous repairs and improvements(multiple years).....\$330,000
14. ORA, Philadelphia, PA: Laboratory casework for laboratory expansion.....\$825,000
15. CBER/CDER, Kensington, MD: Nicholson Lane Research Center-replacement of casework and modernization of space.....\$1,320,000
16. NCTR, Jefferson, AR: Repairs and improvement to utility systems and energy conservation projects.....\$4,485,000
17. CDRH, Various Locations, Rockville, MD: Miscellaneous repairs and improvements.....\$660,000
18. ORA, Chicago, IL: Facility restoration (for decommissioning).....\$715,000
19. ORA, Buffalo, NY: Facility restoration (for decommissioning).....\$715,000
20. CBER, Bethesda, MD: Buildings 29, 29A and 29B, security system.....\$495,000
21. CBER, Bethesda, MD: Buildings 29 and 29A, LAN cabling.....\$440,000
22. CFSAN and CDER, Washington, DC: Federal Building-8, Interim repairs to laboratories and decommissioning.....\$4,500,000
23. CFSAN, Beltsville, MD: Beltsville Research facility, miscellaneous repairs and improvements to MEP infrastructure.....\$1,650,000
24. ORA, Various Locations: Decommissioning of closed laboratories (New Orleans, Baltimore, Brooklyn, Detroit, Minnesota, Dallas).....\$3,575,000

GRAND TOTAL.....\$163,025,000

Question. What is the status of FDA's field laboratory consolidation?

Answer. In 1994, FDA's Office of Regulatory Affairs (ORA) received approval from the Secretary DHHS to proceed with streamlining laboratory operations. ORA's Plan calls for the creation of 5 large multipurpose laboratories in Seattle, WA, Los Angeles, CA, Jefferson, AR, New York, NY and Atlanta, GA, and 4 specialty laboratories in San Juan, PR, Winchester, MA, Philadelphia, PA, and Cincinnati, OH, for a total of nine field labs replacing current network of eighteen over 20 years from 1994 to 2014. ORA projects a costs savings of \$90.5 million. Correspondingly, ORA will maintain inspection, public affairs and enforcement operations at the current District offices and resident posts. In FY 1995 and 1996 appropriations, ORA received appropriations for the design and land acquisition for the Los Angeles and Arkansas new facilities. I would be happy to provide additional information for the record.

[The information follows:]

Field lab consolidation

Status: ORA has formulated Building and Facility (B&F) plans including new construction, expansion, restructuring, and decommissioning, as well as personnel transfers plans which carry out the ORA 21 Laboratory Consolidation goals and coincide with current facility lease expiration dates.

ORA 21 Multipurpose labs

1. New York - Northeast Regional Laboratory, Northeast Regional Office and New York District Office- Jamaica, Queens. Authorization for prospectus approved in 1994 with delineated area in the Borough of Queens. A&E POR prepared for 75,000 net sq ft laboratory and 100,000 net sq ft regional, district office facility. In FY '96, GSA/FDA finalized negotiations for the 4.5 acre site at York College, Jamaica Queens. By June 1996, GSA and FDA to complete review of nine (9) Developers Offers for construction of new facility. GSA to award lease by August 1996. FDA occupancy scheduled for February - March 1999 or earlier depending on the developer finally selected.

2. Arkansas Regional Laboratory. In FY 1995, Congress authorized \$2.5 million for A&E design for the Arkansas Regional laboratory (ARL). ARL A&E design to be completed by March 1996. In FY 1996, \$3.8 million appropriated for joint ARL/NCTR facility. FY 1996 funds are planned to construct A&E design items: 1) animal quarantine facility (\$2.9 million) and 2) general purpose lab facility (\$0.9 million). ARL facility construction is estimated @ \$36 million. Construction funds have not been approved.

3. FDA at Irvine, CA (Los Angeles). In FY 1995, \$9.8 million appropriated for A&E design and land acquisition By March-April 1996, FDA, through the Corps of Engineers, will award an A&E design contract, estimated @ \$2.5-3 million, and acquire the 13 acres of land, estimated at \$3.7 million, at University of California at Irvine. New facility construction is estimated at \$36 million. Construction funds have not been appropriated.

4. Southeast Regional Laboratory. In FY 1996, GSA has issued a sole source SFO to construct a 42,000 net square feet of lab and lab support space facility adjoining the current FDA complex at 8th and Peachtree Streets. GSA projects FDA occupancy by June 1997. B&F funds allocated for renovation: 1) to replace current fume hoods and 2) establish AAALAC animal facility costing \$1.7 million. Renovation projects to be completed by 1996.

5. Seattle Laboratory. In FY 1996, 5,000 square feet expansion and occupancy completed. B&F funds allocated to establish AAALAC animal facility costing \$150,000.

ORA 21 Specialty Labs

6. Cincinnati- Forensics Chemistry Center and Cincinnati District Office. Decommissioning of current facility to begin 1996. Prospectus approved 1992 for 31,170 net square feet laboratory space and 13,930 net square feet office space. GSA and FDA have reviewed A&E POR plans for the new facility. GSA received final developer offers May 12, 1996. GSA is to award lease by June 15, 1996. FDA occupancy scheduled for late 1997-early 1998.

7. Philadelphia. GSA is proceeding to expand current facility by 8,378 square feet and accommodate 16-20 additional laboratory staff. FDA occupancy of new space on floors 10 and 12 at US Customhouse is expected by early 1997.

8. San Juan. FDA and Commonwealth of Puerto Rico have agreed to land agreement. FDA to renovate facility by 2000.

9. Winchester. B&F funds allocated to establish an AAALAC animal facility costing \$100,000. AAALAC facility to be completed by end of 1996.

Other Facility Activities

10. Decommissioning: Decommissioning schedules have been established for each closing laboratory upon lease expiration. FDA estimates decommissioning to cost approximately \$750,000 per facility. In FY 1996, decommissioning activities have commenced for Buffalo, Cincinnati, Chicago, and New Orleans. In FY 1997, decommissioning activities will commence for Baltimore, New York (Brooklyn complex) and Los Angeles (Pico Blvd facility). In FY 1998, decommissioning activities will commence for Dallas, Minneapolis and Detroit.

Personnel Activities

11. Lateral Transfer Process. In FY 1995, twenty laboratory employees voluntarily transferred from closing labs to ORA 21 laboratories. FY 1995 transfers cost \$825,000. In FY'96, we are concluding our lateral transfer announcement period, to date, eight laboratory employees have voluntarily requested transfer. ORA will continue to fund this process through FY 1997-1999.

Question. What is FDA doing to address the concerns raised by the General Accounting Office about FDA's documentation and estimates of the benefits of its proposed field laboratory consolidation?

Answer. On March 19, 1996, the General Accounting Office (GAO) issued its report, "FDA Laboratories: Magnitude of Benefits Associated with Consolidation is Questionable." That report recognized the benefits implicit in FDA's laboratory consolidation plan; however, GAO expressed concern that the magnitude of projected cost savings benefits may be overstated.

FDA has sent a proposed response to DHHS for review. That draft response indicates that FDA is prepared to conduct frequent reevaluations of the consolidation plan to ensure its continuing support to the agency's public health mission in a cost effective manner. Within the past 60 days, senior FDA management have reviewed the plan, progress to date, the current budgetary environment and the viability of renovation and replacement options for involved facilities. Given that the agency has reached decision points on several involved facilities where leases are expiring, implementation of the laboratory consolidation plan regarding those facilities is proceeding.

Future reviews of the status of the plan and its progress will consider such circumstances as emerging public health issues and initiatives, legislative mandates, administration priorities, congressional appropriations, operating costs, technological advances, etc. Based on the results of these reviews, FDA will continue or modify implementation of the plan as necessary to meet the agency's consumer protection mission.

QUESTION SUBMITTED BY SENATOR GORTON

FOOD ADDITIVES

Question. The Federal Food, Drug, and Cosmetic Act (FFDCA) requires FDA to approve or deny a petition for food additives within six months from the date the petition is filed with the Agency. In fiscal year 1995, FDA's average review time for these petitions was 48 months, with the quickest review of any food additive petition taking 20 months -- over triple the review time permitted by law.

On August 25, 1994, FDA received a food additive petition for irradiation of beef. Irradiation has been used to treat foods throughout the world as far back as the 1950s. It would significantly reduce the presence of microbial pathogens, such as E Coli 0157:H7, in beef products. E Coli 0157:H7 was responsible for the deaths of children in Washington state in 1993 and additional deaths in subsequent outbreaks.

Dr. Kessler, the Center for Disease Control (CDC) estimates that annually our country has terrible levels of food borne illness from pathogens that are primarily associated with meat and poultry. CDC estimates that in 1993 there were at least: 732,000 cases of salmonella and 8,000 cases from E. Coli 0157:H7. Recently, the House Committee on Commerce received testimony from a respected University of Wisconsin professor that widespread use of irradiation of meat and poultry would have a positive affect on public health and that the principal obstacle to that happening is FDA's policy. Specifically, he said FDA's

requirement for labeling irradiated pork and poultry with what looks like a warning statement makes irradiated pork and poultry virtually unmarketable. Also, FDA is now over one year past its statutory deadline for acting on the petition to permit irradiation of beef. There seems to be some promise for improving public health in this situation. Would you please address this issue, especially to explain why you are now over one year late in acting on the food additive petition to permit irradiation of beef.

Answer. We are very conscious of the potential public health significance of treatments that could be used to control the levels of pathogens in food, and are working very hard to complete work on the petition to irradiate meat as quickly as we possibly can. In fact, we have taken several steps to ensure efficient and expeditious review of that petition. For example, we met with the petitioner prior to petition submission to confer about needed data and information. When the petition was submitted, it was promptly filed and a team was formed to ensure that experts in all relevant disciplines, particularly chemistry, toxicology, nutrition, and microbiology, would be prepared to review the petition data.

In 1958, Congress included a source of radiation that is used to treat food in the definition of a food additive. Clearly, the intent was to ensure that food treated with ionizing radiation be demonstrated to be safe prior to marketing. The irradiation of meat, if widely adopted, could result in widespread consumption of the product at very high levels of intake among the general population. Before issuing a regulation, the Agency must be able to conclude that any potential changes to the meat as a result of radiation treatment do not cause it to be less safe than non-irradiated meat. Just one example of the issues raised by this petition is that of microbiological safety, that is, radiation at the doses requested kills some bacteria, but not all. We must ensure that in all scenarios where irradiation would be used, that conditions are not created in which bacteria that produce toxins can grow because the number of spoilage organisms has decreased before the meat is obviously spoiled. We are committed to completing work on this petition as quickly as possible, while making sure that all potential safety issues have been completely resolved.

In regard to labeling, we do not agree that the labeling requirement for poultry treated by radiation is responsible for the fact there has not been widespread marketing of this product, even though FDA issued a regulation permitting this use in 1990. The provision requiring special labeling for foods that have been irradiated was promulgated by rulemaking with all interested parties given an opportunity to comment, and was not prompted by any need for a warning. Rather, the label is required because radiation has effects on the characteristics of food. One example is shelf-life -- an important concern -- however, without a label, consumers cannot otherwise tell if the food has been treated. Thus, this labeling requirement is analogous to informing consumers that milk has been pasteurized.

It is not clear that the label looks like a warning. In fact, it is legal for producers to add information to the required statement that would inform consumers of the beneficial effects of radiation in the labeling as long as such additional information is not false or misleading. One example of this would be: this product has been treated to reduce the levels of disease-causing microorganisms. It is our understanding that when irradiated, properly labeled

poultry has been offered for sale, it has been well accepted, or even preferred by consumers. Thus, although poultry producers apparently have chosen not to adopt this technology, we are not aware of any evidence that shows that properly labeled irradiated foods are not accepted by consumers because of the labeling.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

COMPARABLE APPROVAL TIMES

Question. Dr. Kessler, you claim that FDA needs greater resources to conduct timely reviews of various applications and petitions in your agency's jurisdiction. In addition, you speak with great pride about FDA approval times for new drugs being comparable to approval times in other industrialized countries. Please provide me with a listing of the equivalent agency to the Food and Drug Administration in the United Kingdom, Canada, France, Spain, Germany, Australia, Japan, and Italy, as well as the budget (in U.S. dollars) and personnel levels (in full time equivalents), by function, for each of the equivalent regulatory agencies in those countries.

Answer. At this time, we can provide information on some of the countries you list -- the United Kingdom, France, Australia, and Canada. We will provide information on the other countries under separate cover.

Let me first point out, however, that in general, the regulatory agencies and systems of these other countries are vastly different than ours, to the extent that legitimate comparisons of budget and personnel levels are, at best, difficult to make. Our Agency sets the standard for review and approval of products internationally.

Although a limited amount of information is available regarding the staffing and budget for foreign agencies that appear to be FDA counterparts, this must be evaluated in the context of those agencies' actual responsibilities. For example, the UK Medicines Agency was established to take advantage of the European Single Market approach to drug regulation. Under this system, a lead country authority receives application fees and acts as the advocate for the drug firm in the Committee for Proprietary Medicine review process. Once the drug has received approval, inspections and enforcement become the responsibility of the Member State where the manufacturing facility is located.

The UK does not have national legislation covering medical devices. The relatively new Medical Devices Agency has been created in anticipation of the European Directives on Medical Devices coming into effect. Previously, the medical device controls in the UK were exercised through the national health service procurement process. Access to the procurement list, similar to our GSA schedules, was largely dependent on the British Standards Institute for the establishment of criteria and inspections. Clinical effectiveness was not a consideration. Since the European system is modeled in part after this approach, the Medical Device Agency will act primarily as an accrediting agency for private Conformity Assessment Bodies.

As with the UK, the French are moving to implement the European Pharmaceutical and Medical Device Directives. Traditionally, the French drug approval system has relied heavily on a summary "expert report" signed by a

prominent academic physician hired by the drug firm. This expert report is also a feature of the new European application dossier. For medical devices the French "homologation" system requires the submission of a dossier to be evaluated for compliance with French standards and provision of equipment for clinical evaluation in three government hospitals or other health care facilities. In the past, only products offered for sale to government operated hospitals/facilities, which constitutes about 50 percent of the total, were subject to homologation.

It should also be noted that the European drug regulatory system applies not only to the pharmaceuticals and biological products regulated by the FDA, but includes homeopathic and herbal medicines.

The federal authority in Australia is very limited compared to the United States. Australian Commonwealth States and Territories have the responsibility for all domestic manufacturing facilities, not only for foods, but for pharmaceuticals and medical devices. The Therapeutic Goods Administration (TGA) does maintain a list of domestic medical device manufacturers, but firms have no obligation to register. The burden is on TGA to identify the relevant firms. Federal authorities are primarily focussed on imported products for domestic distribution and on export certification and promotion. Federal inspectors can conduct inspections only accompanied by and at the invitation of the State or Territorial authorities. Such invitations are usually associated with export certification or as federal-state technical assistance in problem situations.

The Canadian regulatory system for drugs and biologics is similar to the US approach, although their inspectional authority is limited to domestic firms, despite the fact that a large percentage of these products are imported. Up until now, the primary medical device regulation procedure has been a notification within 90 days after the first sale in Canada. A limited number of devices, referred to as Part 5 devices, have been subject to premarket review to confirm that they meet Canadian standards. The Canadians are currently revising their medical device regulatory system, incorporating many of the approaches of the European system but including requirements for clinical efficacy. For the first time, Canadian firms will be subject to Good Manufacturing Practices requirements, in the form of international quality standards, but the implementation will be through quality registrars accredited by the Canadian Standards Board, which is a quasi-governmental entity.

Food regulation in Canada is shaped by the existence of a supply management system operating at the provincial level. Many commodities, such as milk, are not traded interprovincially. Food quality standards are issued by Agriculture Canada for both raw and processed food imported or shipped between provinces, but many of these appear to be primarily designed to protect Canadian producers rather than to address safety concerns. As with medical devices, the Canadians are in the process of establishing a new regulatory system for food. The plan for this will include federal standards for the inspection of food producers, with the actual implementation and enforcement remaining at the provincial level. All Canadian regulatory bodies are currently moving toward being full cost recovery programs.

For the record, I would like to provide a table showing the budgets in U.S. dollars and personnel levels of regulatory agencies in Australia, France, and the United Kingdom.

[The information follows:]

Country	Current FY Budget (in US Dollars - 4/30/96)	Personnel/FTEs
Australia (1)	\$5.5 million (foods)	72 (budgeted 95-96)(foods)
France (2)	\$284.2 million	506 (as of 12/31/95)
United Kingdom (3) (4)	\$30.4 million (Medicines Control) \$16.72 (Medical Devices)	400 (Medicines Control) 150 (Medical Devices, 1994/1995 FY)

NOTE:

(1) The Australian foods agency is the National Food Authority (NFA). Enforcement of food standards is carried out by the States and Territories. The standards are developed by the NFA and must be approved by the National Food Standards Council, which is made up of Commonwealth, State and Territory Ministers responsible for food laws. The States and Territories then adopt standards approved by the Council as part of their food laws.

(2) The French department for which figures are given is the Agence de Medicament, which is responsible for regulation of drug and biological products. It performs inspections and laboratory tests, evaluates products, carries out pharmacoeconomic studies, as well as coordinates with the EMEA (responsible for control of drug and biologic products at the European Union level).

(3) The Medicines Control Agency is an executive agency which is the UK regulatory authority charged with protecting public health through the control of human medicines. It carries out this task through a system of licensing, inspection, monitoring and enforcement. It operates under the Medicines Act and European Union legislation. All of its costs are covered by user fees.

(4) The Medical Devices Agency is responsible for ensuring that medical devices and equipment for sale or use in the United Kingdom meet appropriate standards of safety, quality and performance.

OFFICIAL INFORMATION REQUESTS

Question. I have been trying for many months to get FDA to provide information on the resources the agency has spent on its inquiry of tobacco products. It wasn't until February 7, 1996, nearly four months after I requested expenditure data, that my office received some information on the FTE's used and dollars spent in FY's 1994 and 1995. The information showed that FDA in FY 1994 used 19 FTE's and spent \$1.3 million on tobacco issues and in FY 1995 used 27 FTE's and spent \$3.5 million. Because GAO is looking into this matter at my request, I provided this information to them. It has come to my attention that GAO has been unsuccessful in getting FDA to provide the details that support FDA's estimates. On March 1, 1996, GAO requested specific information relating to these estimates, including the names of all FDA employees involved in the above FTE estimate, their salary and time spent on tobacco issues, and a breakdown of the estimated costs, including expenditures for travel and salaries. I understand that in early April information on the number of FDA/HHS employees working on tobacco issues was given to GAO. Why has it taken so long to get specific answers to the resources that FDA has spent on tobacco issues?

Answer. We have tried to respond to your inquiries as soon as we were able to assemble the specific information you requested. We have reviewed our response to your October 17, 1995, letter seeking information on the resources the Agency has spent on its inquiry into nicotine-containing tobacco products. While it did take longer than we would have liked, there were legitimate reasons for the delay. The Agency has made a concerted effort to provide you and the subcommittee with accurate, complete, and up-to-date information on the resources used for the tobacco investigation and rulemaking process.

In early September, more than a month before your letter, we responded to the subcommittee that our principal tobacco-related activity in FY 1996 would be reviewing comments received on our proposed rule, "Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco Products to Protect Children and Adolescents." We advised the subcommittee that we anticipated that the resources necessary to complete this task would be relatively small and comparable to the resources that were required to complete FDA's investigation and to issue the proposed rule. We told the subcommittee that out of an agency of almost 10,000 FTEs, approximately two dozen FTEs were used in each of FY 1994 and FY 1995 to complete these tasks. Finally, we also informed the subcommittee that the specific resources needed to complete our task would depend on many factors, including the number of comments we received in response to the proposed rule.

In your October 17, 1995 letter, you questioned statements FDA had made before the subcommittee that a small, varying group of FDA employees was used in our tobacco work. Your letter stated: "In my view, it would have been impossible to produce your massive rulemaking proposal and analysis with the staff commitment you indicated." You asked for specific information about the resources the FDA had used.

In response to your concerns, we undertook an immediate and thorough review of Agency records to determine the specific levels of dollars and FTEs

used. On December 20, 1995, we sent an interim response addressing your concern. We assured you that our previous statements about the small number of resources used were indeed accurate, and that we would continue the detailed review you had requested.

The detailed review took longer than we would have liked for several reasons. While straightforward, it was relatively time consuming to determine the specific resources that were used in FY 1994 and FY 1995. We needed to reconstruct the actual time spent by the more than 100 FDA employees who worked on this project. This task was complicated by the fact that most of the FDA employees who worked on tobacco did so for small blocks of time as part of their ongoing duties and responsibilities.

Answering your questions about the specific resources that would be used in FY 1996 and beyond was even more difficult. Our principal tobacco-related activity in FY 1996 will be considering and addressing the comments received in response to the proposal. To answer your questions about FY 1996 with any confidence, however, we needed to know the volume and nature of the comments we would receive. At the time of your inquiry, we were still in the midst of receiving comments to our proposal. The comment period was originally scheduled to close on November 9, 1995. But we extended the comment period until January 2, 1996, in response to requests by the tobacco industry and others. During the extended comment period that ended January 2, we received more than 700,000 pieces of mail, including about 100,000 unique comments, an Agency record. One comment, made by the tobacco industry, was received on the last day and, including appendixes, was more than 45,000 pages long. We were not in a position to answer your questions about FY 1996 and beyond until we had completed an initial assessment of these comments.

Question. How many FDA and HHS employees have been assigned to work on tobacco issues and what FDA/HHS office provided most of these employees?

Answer. For FY 1994, we used about 19 FTEs on our nicotine-containing tobacco investigation and rulemaking. In FY 1995, about 27 FTEs were used. Most of these employees came from the Office of the Commissioner, including the Immediate Office of the Commissioner and Office of the Chief Counsel, the Office of Management and Systems, the Office of Policy, the Office of External Affairs, and the Office of Operations, including the Immediate Office of the Deputy Commissioner.

Question. Please explain the impact that the assignment of FDA employees to work on tobacco issues has had on FDA's other missions, such as the review and approval of medical devices and drugs?

Answer. FDA's investigation of and rulemaking on nicotine-containing tobacco products has had no adverse effect on the review and approval of medical devices and drugs. In fact, during this period, FDA's review times for medical devices and new drugs have continued to improve. For example, with regard to medical devices, 5,594 510(k)s -- about 98 percent of medical device applications

-- were reviewed by FDA in an average time of 138 days in FY 1995, as compared with 5,498 in 182 days in FY 1994. For human drugs, 82 new drugs were approved in a median time of 16.5 months in calendar year 1995, compared with 62 new drugs approved in 19 months in 1994. Fifteen of the 1995 approvals were "priority" drugs -- having important therapeutic value -- and were approved in a median time of six months, compared with 17 "priority" drugs approved in a median time of 15 months in 1994.

In addition, FDA has achieved remarkable success by meeting and exceeding the performance goals established by the Prescription Drug User Fee Act (PDUFA). PDUFA performance goals require the prompt review of new drug applications (NDAs), resubmitted NDAs, efficacy and manufacturing supplements, as well as the elimination of the overdue backlogs of these types of submissions. The FY 1994 goal was to review 55 percent of the PDUFA submissions on time; the Agency reviewed 96 percent of the NDAs on time, and exceeded numerous other PDUFA goals.

Question. How does the number of employees assigned to work on tobacco issues compare with other recent FDA regulatory efforts? Is this the largest number of FDA employees assigned to a particular regulatory effort since you became Commissioner of FDA?

Answer. In some respects, this is the largest effort, in large part because of the incredible number of comments that were filed. Nearly 100,000 individual written comments and about 600,000 form letters were received by the close of the initial comment period on January 2, 1996. On March 20, 1996 we published a notice in the Federal Register reopening the comment period another 30 days to allow public comment on specific documents being added to the administrative record. The comment period was finally closed April 19, 1996.

In terms of resources, however, regulations related to the food labeling initiative consumed more than tobacco. For the food label, we estimated that about 80 FDA employees worked virtually full time for three years on the initiative. In contrast, the tobacco initiative involved about 19 FTEs in FY 1994, and 27 in FY 1995. For FY 1996, we anticipate using about 10 percent more dollars than in FY 1995 and about the same number of FTEs. It is fair to state, however, that both of these rulemaking initiatives were much more resource-intensive than the average procedures the Agency goes through to publish a final rule.

Question. Where does FDA stand regarding its review of the submitted comments on the proposed regulation of tobacco and when will this review be completed?

Answer. On March 20, 1996, we published a notice in the Federal Register reopening the comment period another 30 days to allow public comment on specific documents being added to the administrative record. Since the comment period closed on April 19, 1996, we have not established a time for when our

full consideration of comments on the proposed new regulations and accompanying analysis will be completed.

Question. What is the timetable that FDA foresees regarding a final decision on the proposed regulation of tobacco products?

Answer. FDA is moving as expeditiously as practicable, consistent with our desire to give all comments full and serious consideration. The comment period just recently closed on April 19, 1996. The volume of comments was enormous - nearly 100,000 written comments and 600,000 form letters.

Question. Why is it taking FDA so long to respond and when does FDA expect to respond to GAO's request on my behalf?

Answer. As we have indicated, we have tried to respond to your inquiries as soon as we were able to assemble the specific information you requested. The Agency has made a concerted effort to provide you and the subcommittee with accurate, complete, and up-to-date information on the resources used for the tobacco investigation and rulemaking process. We met with GAO on March 28 and had a very productive meeting where we established a procedure for responding to your questions as well as other questions. Let me assure you that we will make every effort to respond in a timely manner.

THE EUROPEAN UNION TRUSTS ITS DOCTORS

Question. Dr. Kessler, you defend the FDA's performance relative to that of its European counterparts by referring to a recent report issued by the GAO. This report notes that, even for complex medical devices, the European Union only requires manufacturers to demonstrate that a medical device functions as intended. In contrast, manufacturers in the U.S. must demonstrate, not only that their product works, but that their product will produce a clinical benefit to patients. It is apparent that the European Union has determined that doctors should be trusted to make a decision regarding clinical efficacy once the government has confirmed product efficacy. Dr. Kessler, do you disagree with the soundness of this determination?

Answer. The European Union (EU) system is organized around different principles than the U.S. system. The EU system was primarily established to eliminate barriers to trade to allow free movement of goods -- including medical devices -- among the European member states. In contrast to the EU system, the U.S. system requires products not only meet performance claims but have additional information so doctors know when, how, in whom to use them, and what clinical results to expect when they are used.

The reason FDA requires clinical testing for new devices is to confirm that the product will actually deliver what its labeling promises, and to establish how to use it to its best potential. If the manufacturer wants to claim a new treatment produces better results than existing products, clinical trials are generally the best

way to prove that claim. In addition, good studies will help discern a product's weaknesses and side effects. Thus, valid clinical data will equip doctors with the kind of information necessary to make decisions about which specific products best meet the needs of their patients. Were we to leave the determination of clinical effectiveness to the marketplace, we would run the risk of having many patients treated or implanted with devices that are unproven and possibly dangerous.

A GAO draft report to the Honorable Nancy L. Kassenbaum prepared in December 1995 concluded that the EU System for regulating medical devices is still evolving -- that major aspects of the system are not fully in place. Thus, drawing a meaningful comparison between the EU and FDA is not possible at this time.

It is important to recognize that the cornerstone of America's device review program is a process that evaluates both the safety and effectiveness of new technologies before they are allowed on the market. FDA does not believe that a half way approach can provide the kind of public health protection that the American people expect or deserve.

In judging whether a new device should be marketed, its safety ordinarily cannot be considered separately from its effectiveness. Judging a new device's safety is actually a benefit-risk decision, because few if any products are absolutely safe. The key question is whether a device's potential benefits outweigh its potential risks. Further, most devices that are life-saving also have the capacity to be life-threatening. Often, the greater the potential benefit, the greater the potential risk. The kind of information necessary to answer the risk-benefit question sometimes requires clinical studies designed specifically for this purpose.

It is also important to recognize that critics who assert that there are human costs to a slow review process too often overstate the benefits of an investigational device, while misunderstanding or ignoring its risks. Again, without a well designed clinical trial, both the benefits and risks of a device are in question. There is another important reason for sponsors to undertake clinical trials with independent FDA review of the results. Data showing a clear health advantage for a new product is the quickest and surest way to gain widespread acceptance among physicians and third party payers.

FDA has had legal authority since passage of the 1976 law to require "valid scientific evidence" which includes controlled clinical trials. Controlled clinical trials are often needed to establish how effective a device is in relation to its potential risks to patients and determine how the new product compares in these respects to existing treatments. This should not be confused with having to show clinical superiority.

Finally, the need for greater assurance of device safety and effectiveness is one of the reasons Congress expanded our legislative authority in 1990 to allow us to call for clinical data for devices that come through the 510(k) abbreviated review process.

U.S. DEVICE MAKERS FACE A COMPETITIVE DISADVANTAGE

Question. Dr. Kessler, you have testified that the FDA's high standards result in a competitive advantage for U.S. companies. In contrast, medical device

manufacturers argue that the FDA has imposed a competitive disadvantage on them; and that, as a result of this disadvantage, medical device companies are moving manufacturing and clinical trials overseas in order to escape burdensome FDA regulation.

A 1995 study conducted by the Wilkerson Group for the Health Insurance Manufacturers Association documents this shift. In this study, 43% of the surveyed companies reported increasing or planning to increase manufacturing in Europe. Also, more than three-fifths of device manufacturers reported plans to introduce new products first outside the United States.

The practical effects of the transfer of manufacturing and production to Europe are that American workers are losing their jobs, and American patients are no longer getting timely access to the latest developments in the medical device industry. Dr. Kessler, this doesn't sound like much of a competitive advantage to me. Does it to you?

Answer. The European system was developed in the general absence of regulatory systems for devices in the countries that comprise the European Community. One purpose of the EU medical device review system is to reduce trade barriers and facilitate a single market throughout the EU. As a result of this system being in place, it is quite natural that U.S. manufacturers would be attracted to doing business in Europe. However, FDA has streamlined its procedures for handling export requests for medical devices and these changes have reduced the time required to process these requests from weeks/months to a matter of days. This streamlining process affects export certificates as well as export approvals.

The reasons that some American businesses may be moving their operations overseas extend beyond the regulatory climate in the U.S. Surveys have shown that a number of factors come into play in corporate decisions to globalize their operations. These include high liability risk in the U.S.; constraints on Federal reimbursement in the U.S.; lower labor, transportation and construction costs in foreign countries; the existence of tax incentives, and lower tariffs and greater ease in penetrating markets overseas. In fact, a 1994 report by Health Industry Manufacturers Association entitled, "The Global Medical Device Market Update: Markets for Medical Technology Products," states that 59 percent of the market opportunities for medical technology firms are outside the U.S.

We are working to induce American companies that sponsor clinical studies to continue them here at home. Last year, FDA teamed up with the Health Care Financing Administration to restructure our Investigational Device Evaluation program in a way that will spur technology advancement through broader Medicare coverage and give Medicare beneficiaries greater access to advances in medical technology.

There is additional evidence that the U.S. device industry is thriving. Let me cite some information from U.S. Industrial Outlook in 1994: U.S. medical device shipments were \$45.8 billion and accounted for 52 percent of the \$88 billion global market; U.S. medical device exports were \$8.8 billion with a trade surplus of \$4.2 billion; and the largest market for medical devices is the U.S. which accounts for nearly half of the global market. Further, Commerce Department statistics show that in 1993, medical devices and radiological products accounted for more than \$42 billion in shipments, up from \$24.6 billion in 1987.

Also, according to Commerce statistics, three of the five fastest growing manufacturing industries in the U.S. in 1994 are related to medical devices. Nevertheless, we are still working hard to reduce review times for new products, increase predictability, and promote a better understanding of FDA's regulatory requirements.

THE FDA IS FAILING TO TIMELY APPROVE INNOVATIVE DEVICES

Question. Dr. Kessler, I have heard you testify that the FDA's performance is vastly improved when it really matters -- for innovative products with lifesaving potential. I'd like to explore the validity of this contention for innovative medical devices. According to the GAO, as of May 18, 1995, a total of 126 Pre-market approval applications (for innovative medical devices) had been pending at the FDA for an average of 829 days per application. Dr. Kessler, doesn't this statistic undermine your claim that the FDA rushes to bring critical new technology to the marketplace?

Answer. FDA's review process does take time, but also greatly benefits the public health in a number of ways. FDA's familiarity with medical devices provides industry with guidance on current state of the art methods and practices for the manufacture, testing, use, and most effective labeling of devices. In addition, the FDA's analysis of clinical trials, advice on the development of clinical protocols, and review of clinical testing helps to ensure the safety and effectiveness of medical devices in the marketplace.

In 1993, FDA's review time was unacceptable, both to the device industry and us. We have made significant progress since then in reducing both 510(k) and PMA review times and the backlog of applications awaiting review. For example, in 1992 the number of PMA approvals was only 12. Since then, that number has more than doubled each year. We have also instituted a process to expedite the review of PMAs for devices that offer significant clinical benefit over existing products. In addition, all in-house PMAs were reviewed for eligibility under the expedited review criteria. Those PMAs that met the criteria were granted expedited review status. This included over 20 percent of the PMAs received in FY 1995 and so far in FY 1996. For the record, I would like to provide a chart containing information on Expedited Review PMAs.

[The information follows:]

EXPEDITED REVIEW PREMARKET APPROVALS

Fiscal Year	# PMAs Received	# Expedited	% Expedited
FY 89	84	1	1.2
FY 90	79	0	0
FY 91	75	1	1.3
FY 92	65	4	6.2
FY 93	40	3	7.5
FY 94	43	7	16.3
FY 95	39	10	25.6
FY 96*	24	5	20.8

*as of May 1996

Of the 27 PMAs approved in FY 1995, five received expedited processing for all or part of their review. They were the EPT-1000 Cardiac Ablation System - the first-of-a kind radio frequency powered cardiac ablation system; the Adatomed Silicone Oil, used as a prolonged retinal tamponade in selected cases of complicated retinal detachments where other interventions are not appropriate; the Atakr Ablation System, a radio frequency powered cardiac catheter ablation system; the Fetal fibronectin Enzyme Immunoassay Kit, which aids in assessing the risk of preterm delivery in women with signs and symptoms of early preterm labor, intact membranes and minimal dilation; and the Wallstent TIPS -- Transjugular Intrahepatic Portosystemic Shunt -- Endoprosthesis which is a creation of intrahepatic shunt connections between portal venous system and hepatic vein for prophylaxis of variceal bleeding.

The average FDA time for these five PMAs was 544 days, or 18 months. The average FDA processing time for non-expedited PMAs approved in FY 1995 was 620 days, or 20.6 months. For the 27 PMAs approved so far in FY 1996, the average time from filing to approval, which includes applicant time, for non-expedited review of 21 PMAs was 842 days. However, the average time for the five PMA reviews that we have expedited this year, was only 494 days. The 27 PMAs already approved in FY 1996 equals the total for all of FY 1995.

It is important to note that each PMA can go through two or three rounds of review depending on the completeness of the application. If, for example, the clinical study did not capture data that adequately demonstrates safety and effectiveness of the device for its intended use, as part of its review, FDA will work with the company to redesign the clinical study. The company then conducts the study and submits the data to FDA. Further, if it is determined that a design change is necessary for the device to function as intended, delays will occur. These kinds of situations add to the total review time for the device. Some of the applications with the longest time from filing to approval were delayed due to the length of time that the manufacturer took to gather needed data or redesign the device and the time needed for FDA to review the new studies

that resulted from new trials or device design changes. Also, Good Manufacturing Procedure site failures can cause long delays.

We recently granted the first approval worldwide for a new use of an implantable defibrillator in record time under our expedited review program. This device has the potential to save thousands of lives annually. Because of the public health benefit associated with this technology, FDA accelerated review of the PMA supplement and issued an approval decision only six days after receiving the application.

THE DRUG LAG IS NOT A MYTH

Question. Dr. Kessler, you have described the "drug lag" as a "myth," and you have compared the FDA's drug approvals to approvals in other countries in order to demonstrate the lack of a drug lag. This approach, however, conceals the fact that the U.S. is unlikely to be the first place in which a new drug is approved when compared to all European countries combined. Statistics provided to my office indicate that, of all the FDA's new drug approvals from 1985 to 1993, only 27% were approved first in the United States; and that, on average, the drug lag between Europe and the U.S. over this period was one year.

Dr. Kessler, you make headlines every time you declare the drug lag to be a thing of the past. But, apparently, the reality is that the drug lag continues; and, that Americans without the means to fly to Europe or to other countries where the latest technologies are available are suffering -- and possibly even dying -- while the FDA resists the reforms necessary to catch up with the rest of the world. Dr. Kessler, what do you suggest that I say to a constituent who needs a lifesaving cardiac device that is only available in Europe?

Answer. Let me first address your contention that there continues to be a drug lag in this country. There is considerable evidence for our assertion that claims of a drug lag are in fact a myth in 1996. I would like to provide three items, for the record, which support our position. The first is the Agency's recent study, "Timely Access to New Drugs in the 1990s: An International Comparison." According to this report, American patients are the beneficiaries of both timely and rigorous drug reviews. The second item is the first two pages of a recent newsletter from the Centre for Medicines Research (CMR), an industry-funded, independent research organization. The CMR's preliminary analysis of the most recent data shows that the U.S. is a world leader in the speed of its drug reviews, outpacing all the other countries studied. According to this analysis, the U.S. and the United Kingdom are in a virtual dead heat. Finally, the third item is a recent letter to the Pharmaceutical Research and Manufacturers of America, detailing how their analysis of New Molecular Entities actually shows how the U.S. is a world leader in getting new drugs to market and does not support the often made claim that the U.S. is lagging.

[The information follows:]

Timely Access to New Drugs in the 1990s: An International Comparison

The Food and Drug Administration's rigorous review process is designed to provide American consumers with safe and effective therapies. In recent years, the agency has taken numerous steps to speed that review process, recognizing that protecting and promoting the public health ultimately involves both rigor and speed. To assess the agency's performance in achieving the right balance, extensive data about pharmaceutical therapies recently introduced to the world market have been analyzed from a number of different perspectives. The results are heartening: The medical arsenal in the United States is well-stocked and the challenge of safeguarding the public health is being met.

In this report of new drugs introduced worldwide from 1990 through 1994, the United States, the United Kingdom, Germany, and Japan are compared to determine whether and when new drugs are reaching their consumers. The analysis leads to the following conclusions:

- Numerous therapies with significant public health benefits are available in the United States but have not yet been approved in these other countries. Among those of special interest are stavudine (Zerit), to treat AIDS; tacrine (Cognex), for use in mitigating Alzheimer's disease; imiglucerase (Cerezyme), for Gaucher's disease; and succimer (Chemet), to treat lead intoxication in children.
- Virtually all of the drugs in this study that were approved in the United Kingdom, Germany, or Japan, but not in the United States, are drugs that have essentially the same therapeutic value as other drugs already on the U.S. market. American consumers are missing very few drugs that are potentially novel or medically important.
- The United States is first to approve a significant proportion of the "global" drugs—those ultimately approved in more than one of the countries under study.

Speed of approval is only one measure of performance; the quality of review and decision-making is also critical. The Food and Drug Administration's rigorous evaluation makes its approval decisions an international gold standard, automatically confirming a product's merits in many foreign marketplaces. But it is reasonable to ask whether the time cost of that quality is excessive. Some critics have claimed that a "drug lag" results in long delays between a product's approval abroad and its approval here. Rumors persist of miracle cures barred from American shores.

The analysis presented here reveals that in 1995, those claims are myths. FDA's tough standards do not delay consumer access to important new drugs, compared to other countries. Every country has a medicine cabinet that is somewhat different, and no country stocks all the products that have been approved somewhere on the world market. But the data clearly demonstrate that the United States has available valuable drugs as soon as, and in many cases sooner than, its counterparts around the world.

Database Description

The drugs considered here are the 214 new drugs that were introduced into the world market from January 1990 through December 1994, as reported annually in *Scrip World Pharmaceutical News* and *Scrip Magazine* (Appendix 1 lists the drugs and their approval dates). For purposes of this study, a new drug is defined as a new chemical entity (NCE) or a biological substance that has not been approved previously anywhere in the world. Approval rates for NCEs are commonly used in comparative research but the designation of a drug as an NCE says little about therapeutic value—a new chemical entity may be anything from a minor chemical manipulation of an existing product with no novel properties to a significant breakthrough.

Regulatory agencies in four countries—the United States, the United Kingdom, Germany, and Japan—were asked to provide approval dates for any of the 214 drugs that had been approved in

their countries. This information was supplied by the Medicines Control Agency in the United Kingdom; Bundesinstitut für Arzneimittel und Medizinprodukte and the Paul-Ehrlich-Institut in Germany; and the Ministry of Health and Welfare in Japan. The U.S. data came from the Food and Drug Administration. The selected countries account for 60% of global pharmaceutical sales and have well-developed and competitive drug industries, as well as sophisticated drug approval systems. There is no reason to believe the trends identified here would be markedly different if other comparable countries were included.

According to the responses, 185 of the 214 new drugs have been approved in one or more of the four countries; 29 new drugs have not been approved in any of the four.* The distribution of approvals is as follows:

- 98 new drugs have been approved in only one country.
- 34 new drugs have been approved in two countries.
- 41 new drugs have been approved in three countries.
- 12 new drugs have been approved in all four countries.

Two-Country Analyses

A series of two-country comparisons—pairing the United States with the United Kingdom, Germany, and Japan, respectively—show that U.S. patients have access to most of the drugs that FDA considers “priority” (P) and have been spared at least two products that proved either to be ineffective or to be associated with alarming adverse effects. Priority drugs are defined as drugs that offer at least a modest advance compared to existing therapy or offer treatment for conditions that have no alternate treatment. All other products are classified according to FDA as standard (S), meaning that they have essentially the same therapeutic value as drugs that are already on the U.S. market.

Each head-to-head comparison also shows that the United States is consistently first to approve more of the drugs that have eventually become mutually available (see Figures 1 and 2). For example, the United States first approved 30 of the 58 drugs now approved in both the United States and the United Kingdom. Moreover, the United States had a somewhat better lead time—the 30 drugs approved here first were approved an average of 17 months ahead of U.K. approval; by contrast, the 28 U.K.-first drugs were approved an average 15.8 months ahead of U.S. approval. A greater difference in lead time is apparent when the United States is compared with Germany and Japan.

The U.S./U.K. Comparison

As Figure 3 shows, 58 of the 214 NCEs in this study have been approved in both the United States and the United Kingdom; 29 have been approved in the United Kingdom but not in the United States; and 18 have been approved in the United States but not in the United Kingdom. While there appears to be no drug of major public health interest to U.S. patients among the 29 products approved exclusively in the United Kingdom, the United States does have a number of therapies important to its consumers that have not yet been approved in the United Kingdom.

Two of the 29 U.K.-exclusive drugs were initially considered priority drugs by FDA, but both were subsequently withdrawn from the worldwide market, primarily for safety reasons. These products are remoxipride (Roxiam), used to treat schizophrenia and which caused aplastic anemia, and centoxin (HA-1A), used to treat gram-negative sepsis and which was withdrawn following an analysis of an FDA-required trial that showed no benefit among patients treated with the product and suggested the possibility of increased mortality.

Several other products exclusively available in the United Kingdom are almost identical in action to U.S. products, including lofexidine, an anti-hypertensive; molgramostim and lenograstim, biologics sometimes used in conjunction with chemotherapy or bone-marrow transplantation; and epoetin-beta, used to treat anemia associated with renal failure. Also among the U.K.-only new drugs are several antimicrobials and an anti-emetic, all similar to therapies available in the United States.

* The drug approval information in this analysis is current as of April 1995.

In contrast, of the 18 new drugs approved in the United States but not in the United Kingdom, the FDA designated 9 as priority drugs, as listed in Figure 4. Of particular note: felbamate (Felbatol), for epilepsy unresponsive to other therapies; gallium nitrate (Ganite), for cancer-related hypercalcemia; histrelin (Supprelin), for central precocious puberty; imiglucerase (Cerezyme) for Gaucher's disease; stavudine (Zerit) for HIV infection; succimer (Chemet) for lead intoxication; and tacrine (Cognex) for Alzheimer's disease. American consumers clearly benefit from the availability of these drugs.

The U.S./Germany Comparison

As Figure 5 shows, 44 of the 214 new drugs have been approved in both the United States and Germany; 34 have been approved in Germany but not in the United States; and 32 have been approved in the United States but not in Germany. The United States was first to approve 31 of the 44 mutually available drugs, approving them an average of 17.9 months ahead of the German approval (see Figures 1 and 2).

Of the 34 German new drugs that have not been approved in the United States, only one is expected to be a priority—acellular pertussis vaccine. FDA has made special efforts to encourage submission of applications for the use of this vaccine and is committed to a priority review when the applications are submitted. Meanwhile, an older pertussis vaccine is available. The remaining German-only products are comparable to therapies already approved in the United States. For example, the German drugs cefepime and fleroxacin are both antibiotics for which multiple therapeutic alternatives exist in the United States. Likewise, cilazapril, an ACE inhibitor; lofexidine, an anti-hypertensive; and molgramostim, a recombinant human granulocyte macrophage-colony stimulating factor (GM-CSF), appear to be comparatively effective to the U.S.-approved drugs in the same class.

On the other hand, among the 32 therapies approved in the United States but not in Germany, 16—50%—have been designated by FDA as priority drugs. As listed in Figure 6, these include cladribine (Leustatin) and fludarabine (Fludara), both to treat cancer; and salmeterol (Serevent), for asthma. Felbamate, gallium nitrate, histrelin, imiglucerase, stavudine, succimer, and tacrine, previously described in the U.S./U.K. comparison, also remain unapproved in Germany.

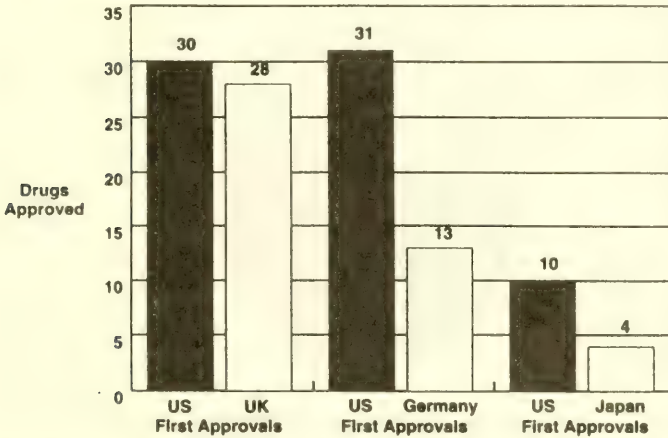
The U.S./Japan Comparison

Figure 7 shows that 14 of the 214 new drugs have been approved in both the United States and Japan; 82 have been approved in Japan but not in the United States; and 62 have been approved in the United States but not in Japan. The United States was first to approve 10 of the 14 mutually available drugs, approving them an average of 22.4 months ahead of the Japanese approval (see Figures 1 and 2).

Of the 82 new drugs that have been approved in Japan but not in the United States, three have been classified as priority drugs by FDA. Of these, one is currently under FDA review and a second is undergoing U.S. trials. The sponsor of the third priority therapy sought approval here, but an FDA advisory committee found the submitted data insufficient to recommend approval. Eight antibiotics and a number of antihypertensive medications are among the 79 standard therapies approved only in Japan, and none offers any apparent advantage over alternative products in the United States.

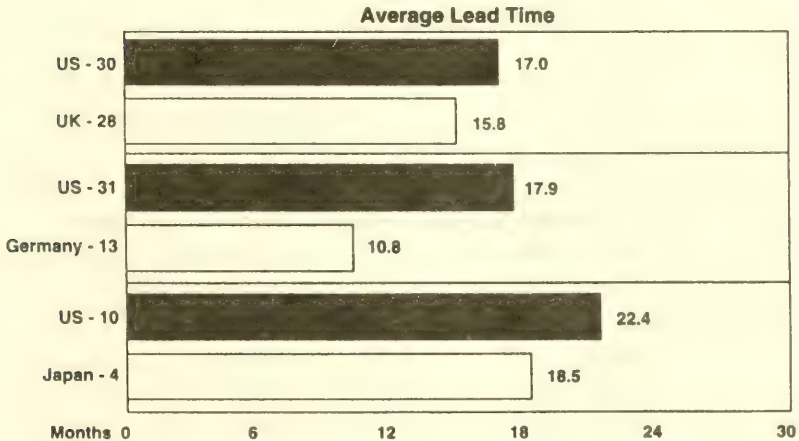
Again, the contrast with U.S.-only therapies is marked. Thirty-three of the 62 therapies (53%) approved in the United States but not in Japan are FDA-designated priority drugs. Among the noteworthy examples listed in Figure 8 are atovaquone (Mepron), used to treat a special type of *Pneumocystis carinii* pneumonia in immunocompromised patients; finasteride (Proscar), a treatment for enlargement of the prostate gland; gabapentin (Neurontin) and lamotrigine (Lamictil), used in people with epilepsy; idarubicin (Idamycin) and paclitaxel (Taxol), used to treat breast and ovarian cancer; sumatriptan (Imitrex), for migraine headaches; and zalcitabine (Hivid), for HIV infection. Other notable drugs described previously include cladribine, felbamate, fludarabine, gallium nitrate, histrelin, imiglucerase, stavudine, succimer, and tacrine.

Figure 1:
Two-Country Comparisons: First Approvals of
Mutually Approved New Drugs from 1990 to 1994



Note: Analysis based on all new drugs first marketed anywhere in the world between 1990-1994; Data collected through April 1996

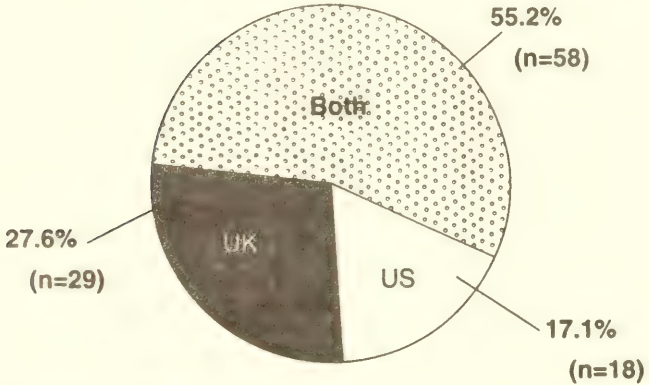
Figure 2:
Two-Country Comparisons: First Approvals of
Mutually Approved New Drugs from 1990 to 1994



Note: Analysis based on all new drugs first marketed anywhere in the world between 1990-1994; Data collected through April 1996

Figure 3:
New Drugs Approved in UK and US

1990 - 1994



n = 105 approved in either US, UK, or both

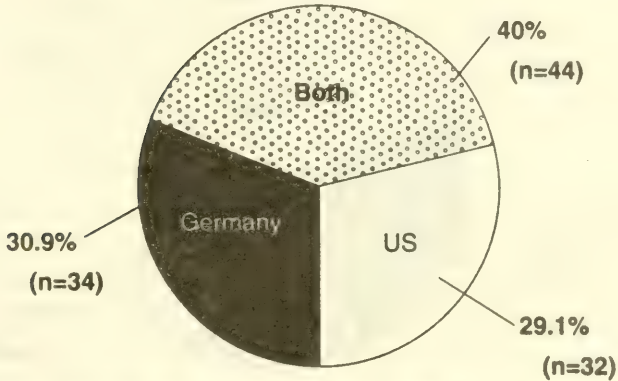
Note: Analysis based on all new drugs first marketed anywhere in the world between 1990-1994; Data collected through April 1995

Figure 4:
New Drugs Approved in US
But Not in UK

- | | |
|--|-----------------------------|
| • BENAZEPRIL | • INTERFERON ALFA-N3 |
| • CEFPROZIL | • INTERFERON BETA-1B |
| • DEZOCINE | • MASOPROCOL |
| • DOXACURIUM CHLORIDE | • MERIEUX VARICELLA VACCINE |
| • FELBAMATE - RESTRICTED IN US - 1994 | • PEGADEMASE BOVINE |
| • GALLIUM NITRATE | • PEGASPARGASE |
| • HALOBETASOL | • STAVUDINE (d4T) |
| • HISTRELIN | • SUCCIMER |
| • IMIGLUCERASE | • TACRINE |

Priority drugs in boldface

Figure 5:
New Drugs Approved in Germany and US
1990 - 1994



n = 110 approved in either Germany, the USA, or both

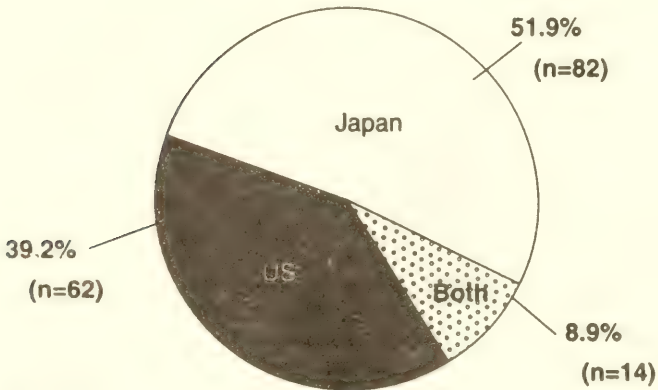
Note: Analysis based on all new drugs first marketed anywhere in the world between 1990-1994; Data collected through April 1995

Figure 6:
New Drugs Approved in US But Not in Germany

- | | |
|--|--------------------------------|
| • CEFPROZIL | • LOSARTAN |
| • CLADRIBINE | • MASOPROCOL |
| • DEZOCINE | • MERIEUX VARICELLA VACCINE |
| • DOXACURIUM CHLORIDE | • MIVACURIUM |
| • FACTOR VIII - rDNA (KOGENATE) | • MORICIZINE |
| • FELBAMATE - RESTRICTED IN US - 1994 | • NEFAZODONE |
| • FLOSEQUINAN - WITHDRAWN WW 1993 | • PEGADEMASE BOVINE |
| • FLUDARABINE | • ROCURONIUM BROMIDE |
| • FLUOSOL - PERFLUOROCARBON | • SALMETEROL |
| • GALLIUM NITRATE | • SARGRAMOSTIM (GM-CSF) |
| • HALOBETASOL | • SERTRALINE |
| • HISTRELIN | • STAVUDINE (d4T) |
| • IMIGLUCERASE | • SUCCIMER |
| • INTERFERON ALFA-N3 | • TACRINE |
| • INTERFERON BETA-1B | • TRIMETREXATE |
| • LODOXAMIDE | • VENLAFAXINE |

Priority drugs in boldface

Figure 7:
New Drugs Approved in Japan and US
1990 - 1994



n = 158 approved in either Japan, the USA, or both

Note: Analysis based on all new drugs first marketed anywhere in the world between 1990-1994; Data collected through April 1995

Figure 8:
New Drugs Approved in US But Not in Japan

- | | |
|---|------------------------------------|
| • ALGLUCERASE | • LAMOTRIGINE |
| • ATOVAQUONE | • LEVOCABASTINE |
| • CALCIPOTRIOL | • LODOXAMIDE |
| • CEFPROZIL | • LORACARBEF |
| • CLADRIBINE | • LOSARTAN |
| • COLFOSCERIL | • MASOPROCOL |
| • DESFLURANE | • MERIEUX VARICELLA VACCINE |
| • DEZOCINE | • MILRINONE (IV) |
| • DORNASE ALFA | • MIVACURIUM |
| • DOXACURIUM CHLORIDE | • MORICIZINE |
| • EFLORNITHINE | • NEFAZODONE |
| • FACTOR VIII - rDNA (RECOMBINATE) | • PACLITAXEL (TAXOL) |
| • FAMCICLOVIR | • PAROXETINE |
| • FELBAMATE - RESTRICTED IN US - 1994 | • PEGADEMASS BOVINE |
| • FINASTERIDE | • PEGASPARGASE |
| • FLOSEQUINAN - WITHDRAWN WW 1993 | • RIFABUTIN |
| • FLUDARABINE | • RISPERIDONE |
| • FLUOSOL - PERFLUOROCARBON | • ROCURONIUM BROMIDE SALMETEROL |
| • FLUVASTATIN | • SALMETEROL |
| • FOSINOPRIL | • SARGRAMOSTIM (GM-CSF) |
| • GABAPENTIN | • SERTRALINE |
| • GALLIUM NITRATE | • STAVUDINE (d4T) |
| • HALOBETASOL | • SUCCIMER |
| • HEPATITIS A VACCINE - HAVRIX | • SUMATRIPTAN |
| • HISTRELIN | • TACRINE |
| • IDARUBICIN | • TAZOBACTAM (COMBO) |
| • IMIGLUCERASE | • TEMAFLOXACIN - WITHDRAWN WW 1992 |
| • INTERFERON ALFA-N3 | • TORASEMIDE (TORSEMIDE) |
| • INTERFERON BETA-1B | • TRIMETREXATE |
| • INTERFERON GAMMA 1B | • VENLAFAXINE |
| • KETOROLAC - WITHDRAWN GER 6/93 & FRA 12/93 | • ZALCITABINE (DDC) |

Priority drugs in boldface

Who Approves Drugs First?

Another way to examine the database presented here is to simply see which of the four countries was first to approve a drug. Grouping the percentage of first approvals according to the number of countries that ultimately approve that product reveals even more because it permits a distinction between drugs approved in only one country and drugs that are more widely available—a product that is approved in more than one country is likely to have greater therapeutic or economic value than a product that is never approved beyond the boundaries of a single nation. Figures 9 and 10 show these groupings, based on the 185 drugs that have been approved in at least one of the four country markets from 1990 through 1994. (Figure 9 shows data for drugs approved in one, two or three countries, while Figure 10 shows cumulative results, i.e. drugs approved in at least one country, drugs approved in at least two countries, drugs approved in at least three countries, or drugs approved in all four countries.) In every category, the United States had the second highest percentage of first approvals.

To some extent, Japan is an anomaly because its pharmaceutical market is more isolated than that of other industrialized nations. As Figure 9 shows, Japan has 68% of the drugs that have been approved in only one country, compared to the U.S. share of 16%, Germany's 9%, and the United Kingdom's 6%. Inevitably, this skews the data wherever drugs approved in just one country are included in the analysis—for example, Figure 10 shows that Japan was first to approve 43% of the drugs that have been approved in one or more of the four countries; the United States followed with 24% of the first approvals, while the United Kingdom had 22% and Germany 11% in this category.

Japan's performance may be partly explained by its pricing system, which puts a particular premium on the development of new drugs even if they don't have a different therapeutic effect. In Japan, prices for marketed drugs are automatically lowered after a certain period. Cultural factors may also create a preference for locally developed drugs.

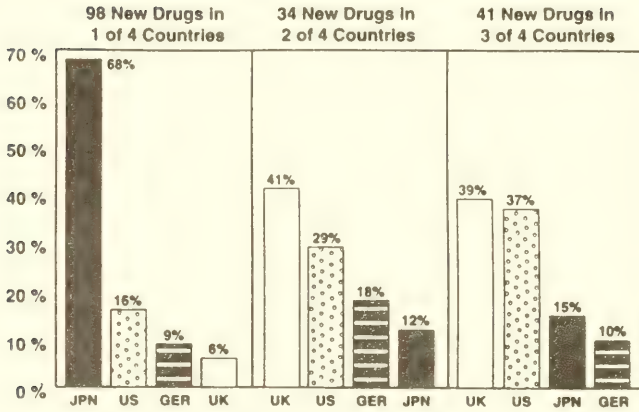
When the analysis focuses on "global drugs"—those therapies approved in more than one country—a different picture emerges: the United Kingdom and the United States are a close first and second, and both clearly outpace Japan and Germany. For example, 41 drugs have been approved in three out of the four countries. Of these:

- The United Kingdom was first to approve 39%.
- The United States was first to approve 37%.
- Japan was first to approve 15%.
- Germany was first to approve 10%.

The numbers are comparable for the 53 drugs that have been approved in at least three of the four countries:

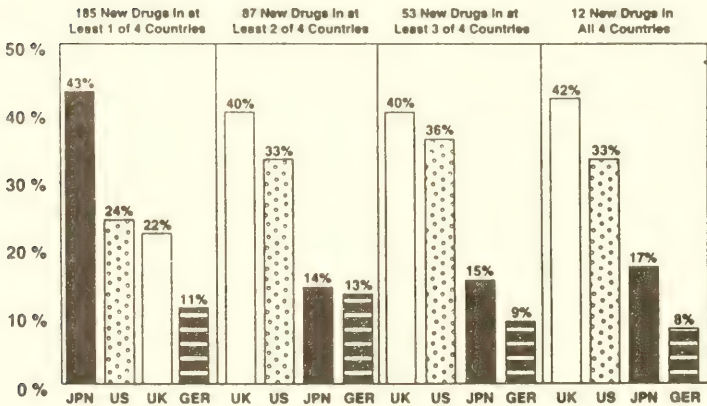
- The United Kingdom was first to approve 40%.
- The United States was first to approve 36%.
- Japan was first to approve 15%.
- Germany was first to approve 9%.

Figure 9:
Percent of First Approvals



Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1995

Figure 10:
Percent of First Approvals



Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1995

The "Within Country" Analysis

Another approach to analyzing the database focuses on the order in which each of the countries approves drugs within its own universe of approved therapies. This is considered a "real world" analysis because it is based on the fact that none of the four countries will ever approve all available drugs. An order of approval was determined for each approved product in each of the four countries, regardless of where else it has been approved. For example, the United States has approved 45 of its 76 new drugs first—before the United Kingdom, Germany, or Japan.

As Figure 11 shows:

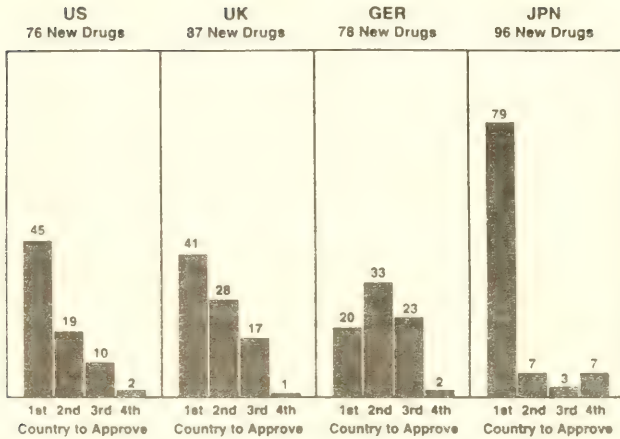
- *United States*: Of the 76 new drugs that have been approved in the United States, 45 were approved first by the United States, 19 were approved second, 10 were approved third, and 2 were approved fourth.
- *United Kingdom*: Of the 87 new drugs that have been approved in the United Kingdom, 41 were approved first by the United Kingdom, 28 were approved second, 17 were approved third, and 1 was approved fourth.
- *Germany*: Of the 78 new drugs that have been approved in Germany, 20 were approved first by Germany, 33 were approved second, 23 were approved third, and 2 were approved fourth.
- *Japan*: Of the 96 new drugs that have been approved in Japan, 79 were approved first by Japan, 7 were approved second, 3 were approved third, and 7 were approved fourth.

Again, there is no indication of delay in the United States. The United States and the United Kingdom were either first or second to approve the great majority of the new drugs eventually approved for marketing within their respective countries. The United States approved 59% of its drugs first and 84% of them either first or second. Similarly, the United Kingdom approved 47% of its own drugs first and was first or second for 79% of them. Germany, in contrast, was first to approve only 26% of its own drugs and either first or second for 68% of them. Japan, again, is an anomaly, approving 82% of its own drugs first, and 90% of them first or second, primarily because many of these products are never approved anywhere else.

In a further analysis, approvals in each country were examined in the context of the global market (Figures 12-15). As Figure 12 shows, 12 of the United States' 76 NCEs have been approved in all four countries (16%). The United States was first to approve 4 of the 12 (33%) and second to approve 3 of them (25%). Thirty-two of the 76 new drugs have been approved in three countries (42%), with the United States approving 15 of those first (47%) and 10 second (31%). This is roughly comparable in the United Kingdom (see Figure 13), where 12 of its 87 new drugs (14%) have been approved in all four countries. Of those 12, the United Kingdom approved 5 first (42%) and 3 second (25%). Forty of the United Kingdom's new drugs have been approved by three countries (46%), with the United Kingdom approving 16 first (40%) and 10 second (25%).

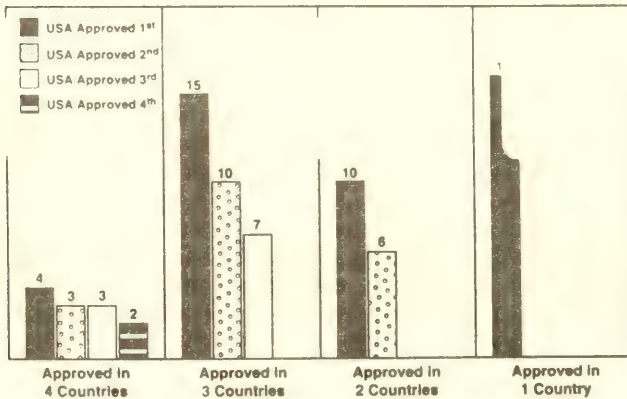
In general, Germany appears more likely to approve the drugs in this analysis second or third than first. Figure 14 shows that 12 of its 78 new drugs have been approved in all four countries (15%), with Germany having just one first approval (8%); Germany approved 3 products second (25%), and 6 third (50%). Of the 40 new drugs that have been approved in three countries, Germany approved 4 first (10%), 19 second (48%), and 17 third (43%). Japan's unusual drug market is again apparent in Figure 15; 12 of its 96 new drugs (13%) have been approved in four countries (of these, Japan approved 2 first and 3 second) and 11 have been approved in three countries (11%), with Japan approving 6 first and 2 second. Sixty-seven drugs (70%) have only been approved in Japan.

Figure 11:
Order of Approvals



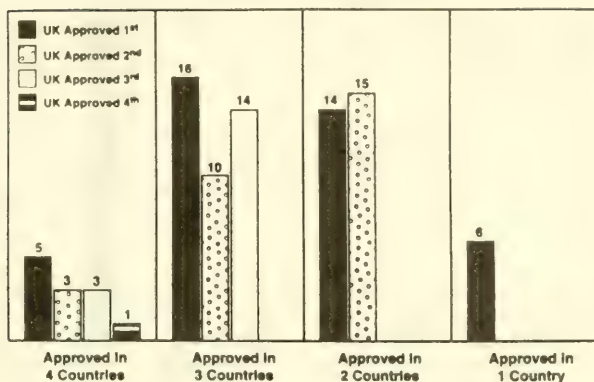
Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1995

Figure 12:
US Order of Approvals



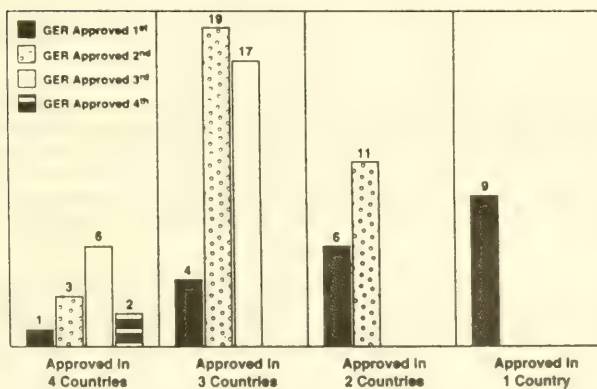
Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1995

Figure 13:
UK Order of Approvals



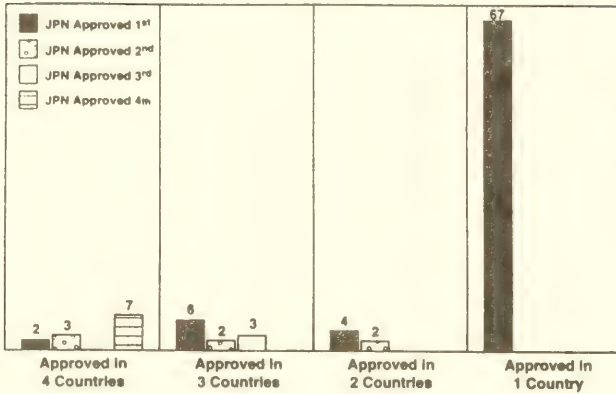
Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1995

Figure 14:
Germany Order of Approvals



Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1995

Figure 15:
Japan Order of Approvals



Note: Based on 185 new drugs first marketed in the world 1990-1994 and approved in either US, UK, Germany or Japan by April 1996

The Safety Record

Keeping products whose benefits do not outweigh their risks off the market is as important as ensuring that American consumers have access to significant therapies. During the study period, at least six drugs approved somewhere on the four-country market were withdrawn or severely restricted after safety problems emerged. In two instances, serious risks were identified prior to FDA approval; in other cases, adverse effects did not emerge until a sufficiently large patient population had used the drug, highlighting the importance of FDA's postmarketing surveillance system. Sketches of six drugs follow:

As mentioned earlier, neither remoxipride nor centoxin had been approved in the United States when safety and efficacy concerns surfaced. Remoxipride was marketed in the United Kingdom and was under FDA review when it was linked to aplastic anemia and withdrawn from marketplaces around the world. Centoxin was marketed in the United Kingdom and Germany until it was pulled from worldwide distribution after an analysis of a trial required by FDA showed no evidence of benefit and strongly hinted at increased mortality rates among patients using the drug.

Flosequinan (Manoplax), the first in a new class of vasodilators used to treat congestive heart failure, was launched in the United Kingdom and later approved in the United States. A subsequent U.S. trial identified increased mortality among patients using the drug, and it was eventually withdrawn worldwide.

Felbamate (Felbatol), an anti-seizure medication for particularly aggressive seizure disorders and approved only in the United States, was found after marketing to cause rare aplastic anemia and hepatic injury. Its use was restricted in the United States to a second-line agent, but it is still considered useful for treating selected patients unresponsive to alternative therapies.

Temafloxacin (Omniflox), a quinolone antibiotic used in common infections, was launched in August 1991 in the United Kingdom and approved early the following year in Germany and the United States. Shortly after U.S. approval, it was withdrawn because FDA postmarketing surveillance determined that serious adverse effects—including hemolytic anemia, thrombocytopenia, kidney failure, liver injury, and anaphylaxis—occurred significantly more frequently with temafloxacin than with other antibiotics in the same family.

Ketorolac (Toradol), a parenteral analgesic, was withdrawn from Germany and France after it was found to cause gastrointestinal hemorrhage, acute renal insufficiency, and anaphylactic reactions. In the United States, where it was first launched, certain adverse effects were expected and were not deemed to outweigh ketorolac's benefits, which include an absence of the respiratory depression normally associated with narcotic analgesics, typically the alternative therapeutic choice. U.S. trials have identified factors likely to be associated with increased risk of gastrointestinal bleeding, and the product's instructions have been modified to stress the proper use. It has also been relabeled and retained on the U.K. market.

As these findings demonstrate, the capacity to identify potential adverse effects underscores the value both of rigorous clinical trials to determine the product's utility and initial safety profile and of postmarketing surveillance to determine if that safety profile persists when the product is marketed in a wider population.

Conclusion

The data presented in this report hint at some of the complexities involved in making international comparisons. Therapeutic practices, pricing and reimbursement structures, industry marketing strategies, and cultural mores are just a few of the elements that may affect drug availability, regardless of the nature of the regulatory system in place. Nonetheless, by any objective standard the United States is a leader, both in the quality and the timeliness of its reviews, especially for therapeutic priorities that represent real advances. The American public is the clear beneficiary.

Appendix 1: New Drug Database

The following table compares recent new drug approval activity in the United States, the United Kingdom, Germany, and Japan.

NEW DRUG NAME: Column one identifies the drug, as reported by Scrip World Pharmaceutical News and Scrip Magazine. The list is sorted alphabetically by drug name within five groups, representing the number of countries analyzed here (0, 1, 2, 3, 4) in which that drug has been approved. Occasional notes are also included in this column.

PRIORITY ?: Column two identifies drugs that FDA has classified for priority review.

1ST MKT: Column three identifies the country where the drug was first marketed, as reported by Scrip World Pharmaceutical News and Scrip Magazine.

SCRIP YEAR: Column four identifies the calendar year in which the drug was first marketed, as reported by Scrip World Pharmaceutical News and Scrip Magazine.

NUMBER OF APPROVALS: Column five is the number of approvals for each drug among the four countries studied, as of April 1995.

USA DATE/UK DATE/GER DATE/JPN DATE: Columns six through nine report the approval date for each of the four countries studied, where applicable. The most specific information provided by the regulatory authority in each country is reported. This information was sufficient to determine rank order of approval in all cases.

USA RANK/UK RANK/GER RANK/JPN RANK: Column ten through thirteen identify the rank order of approval for each drug among the four countries studied.

Appendix 1: New Drug Database

214 NCEs First Marketed in the World 1990-94

Sorted alphabetically within "Number of Approvals"

NEW DRUG NAME	PRIORITY ?	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
acaclofenac		SPN	92	0								
acetorphan		FRA	93	0								
alendronate		ITA	93	0								
alpidem - suspended in France - 1993		FRA	91	0								
amiooprofen		SPN	90	0								
artemether		CHN	92	0								
bisantrene		FRA	91	0								
brodimoprim		ITA	93	0								
butibufen		ARG	92	0								
cacochroman		IND	91	0								
choline alphoscerate		ITA	90	0								
cinacalcin		SPN	90	0								
cinolazepam		AUT	93	0								
clotromecine		ITA	91	0								
dexrazoxane		ITA	92	0								
dihydroartemisinin (Cotecxin)		CHN	94	0								
dinithromycin		SPA	93	0								
dioicarb sodium - withdrawn New Zealand		NZL	91	0								
droxicam		SPN	90	0								
ebsastine		SPN	90	0								
fotermustine		FRA	90	0								
mirtazapine		HOL	94	0								
modafinil		FRA	94	0								
Orochol (m) oral cholera vaccine		SUI	94	0								
oxcarbazepine		DEN	90	0								
pidotimod		ITA	93	0								
pramiracetam		ITA	93	0								
rufloxacin		ITA	92	0								
telmestane		ITA	92	0								

NEW DRUG NAME	PRIORITY ?	1ST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
actarit		JPN	94	1				1994				1
amipiroxam		JPN	94	1				1994				1
angiotensin II - human		JPN	94	1				1994				1
auractam		JPN	93	1				1993				1
arbelacin		JPN	90	1				09/28/90				1
argatroban		JPN	90	1				01/23/90				1
barbidipine		JPN	92	1				1992				1
benidipine		JPN	91	1				1991				1
beraprost		JPN	92	1				1992				1
betamethasone butyrate propionate		JPN	94	1				1994				1
buclafine		JPN	92	1				1992				1
cefdinir		JPN	91	1				1991				1
cefditoren		JPN	94	1				1994				1
cefepime		JPN	93	1				1993				1
cefotiam hexetil		SWE	93	1			Jan-95	1994			1	1
cefprozil		JPN	91	1				1991				1
celmoleukin (interleukin-2)		USA	92	1	12/23/91			1992	1			1
closopiramine		JPN	92	1				1991				1
Curosurf (m) - poractant alfa		ITA	92	1		11/12/93		1991		1		1
cytarabine ocfosfate		JPN	93	1				1993				1
deprodone		JPN	92	1				1992				1
dezocine		USA	91	1	12/29/89			1992	1			1
doxacurium chloride		USA	91	1	03/07/91			1994	1			1
ecabet		JPN	94	1				1994				1
efomedipine		JPN	94	1				1994				1
emedastine		JPN	93	1				1993				1
epalrestat		JPN	92	1				1992				1
epinastine		JPN	94	1				1994				1
felbamate - restricted in USA - 1994	P	USA	93	1	07/29/93			1994	1			1
gallium nitrate	P	USA	91	1	01/17/91			1994	1			1
guasperimus (deoxyspergualin)		JPN	94	1				1994				1

NEW DRUG NAME	PRIORITY ?	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
halobetasol		USA	91	1	12/17/90				1			
bustrelin		USA	93	1	12/24/91				1			
iloprost	P	GER	92	1			Mar-92	1994			1	
imidapril		JPN	94	1								
imiglicerase	P	USA	94	1	05/23/94				1			
interferon alfa-n3		USA	90	1	10/10/89				1			
interferon beta-1b	P	USA	93	1	07/23/93			1992				
interferon gamma-1a		JPN	92	1				1994				
irinotecan		JPN	94	1								
lacidipine		ITA	91	1		12/10/91				1		
lanconazole		JPN	94	1				1994				
levofloxacin		JPN	94	1				1994				
manidipine		JPN	90	1				06/29/90				
masoprocol		USA	92	1	09/04/92				1			
merieux varicella vaccine		FRA	93	1	03/17/95				1			
metoprenem		ITA	94	1		01/19/95				1		
miltefosine		GER	93	1			Oct-92				1	
mirimostum (G-CSF)		JPN	91	1				1991				
mofezolac		JPN	94	1				1994				
moxonidine		GER	91	1			Jan-91				1	
nadifloxacin		JPN	93	1				1993				
nartograstim		JPN	94	1				1994				
nazasetron (azasetron)		JPN	94	1				1994				
nemonapride		JPN	91	1				1991				
neticonazole		JPN	93	1				1993				
Orgaran (m) - glycosaminoglycans - danapariod		HOL	92	1		04/14/93						
panipenem (combination)		JPN	94	1				1994			1	
paniprazole		GER	94	1			Aug-94					
pegademase bovine		USA	90	1	03/21/90				1			
permiolast		JPN	91	1				1991				
pertussis vaccine acellular - primary		ITA	93	1			03/17/95					

NEW DRUG NAME	PRIORITY ?	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
placatinide		JPN	91	1				1991				1
pimobendan		JPN	94	1				1994				1
polaprezinc		JPN	94	1				1994				1
portimer		HOL	94	1				10/05/94				1
propagermanium		JPN	94	1				1994				1
pro-urokinase		JPN	92	1				1992				1
pumactant		GBR	90	1		04/11/94				1		
rebamipide		JPN	90	1				09/28/90				1
renoxipride - withdrawn WW - 1994		DEN	90	1		08/22/90	Apr-93				1	
reviparin		GBR	93	1								
romaride		JPN	91	1				1991				1
sarpogrelate		JPN	93	1				1993				1
sertaconazole		SPA	92	1			Apr-94				1	
sicoflurane		JPN	90	1				01/23/90				1
simetlone - withdrawn - patent dispute		JPN	91	1				1991				1
sobuzoxane		JPN	94	1				1994				1
sonastomedin-1 (GF-1); Igcf (tm)		SWE	94	1			Mar-95				1	
sovirudine - halt shipment 10 / 93 for safety		JPN	93	1				1993				1
stavudine (d4T)	P	USA	94	1	06/24/94				1			
succimer	P	USA	91	1	01/30/91				1			
tacalcitol		JPN	93	1				1993				1
tacrine (for alzheimer's)	P	USA	93	1	09/09/93							
tamulosin		JPN	93	1				1993				1
tazanolast		JPN	90	1				09/28/90				1
teceleukin (interleukin-2)		JPN	92	1				03/27/92				1
temocapril		JPN	94	1				1994				1
tilisolol		JPN	92	1				1992				1
tiakinaase		JPN	91	1				1991				1
torientin		JPN	94	1				1994				1
tosufloxacin		JPN	90	1				01/23/90				1
unoproston		JPN	94	1				1994				1
venarutimide		JPN	90	1				06/29/90				1

NEW DRUG NAME	PRIORITY *	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
sargramosum (GM-CSF)	P	USA	91	2	03/05/91	09/27/93			1	2		
sertraline		GBR	90	2	12/30/91	11/19/90			2	1		
sparfloxacin		JPN	93	2		12/13/94		1993		2		1
trandolapril		FRA	93	2		03/29/93	Mar-93			2	1	
trimetrexate		USA	94	2	12/17/93	12/29/94			1	2		
tropisetron		HOL	92	2		10/28/92	Oct-93			1	2	
venlafaxine		USA	94	2	12/28/93	11/22/94			1	2		
acarbose		GER	90	3		06/28/93	Jun-90	10/01/93		2	1	3
alglucerase		USA	91	3	04/05/91	11/21/94	Jun-94		1	3	2	
amorolfine	P	GBR	91	3		06/10/91	Sep-92	10/01/93		1	2	3
aiovaquone	P	USA	92	3	11/25/92	08/23/94	Aug-94		1	3	2	
benazepril		DEN	90	3	06/25/91		Dec-92	01/19/93		1	2	3
calcipotriol		DEN	91	3	12/29/93	01/10/91	Jul-92		3	1	2	
carvedilol		GER	91	3		07/14/94	Oct-90	01/19/93		3	1	2
cefodizime		JPN	90	3		12/10/91	Mar-91	03/30/90		3	2	1
cefetibuten		JPN	93	3		04/13/94	Jun-93	1993		3	2	1
cilazapril		SUI	90	3		10/26/90	Sep-91	09/28/90		2	3	1
colfoecril	P	USA	90	3	08/02/90	12/14/90	Jan-92		1	2	3	
desflurane	P	USA	92	3	09/18/92	07/19/93	Nov-94		1	2	3	
dornase alfa	P	USA	94	3	12/30/93	01/12/94	Sep-94		1	2	3	
eflornithine	P	USA	90	3	11/28/90	11/27/91	Jun-93		1	2	3	
epoetin beta		JPN	90	3		04/08/94	Apr-90	01/23/90		3	2	1
factor viii - rDNA; Kogenate (m)	P	USA	93	3	02/25/93	05/17/94		04/02/93	1	3		2
factor viii - rDNA; Recombinate (m)	P	SWE	92	3	12/10/92	05/01/92	Jul-93		2	1	3	
fanciclovir		GBR	94	3	06/29/94	12/10/93	Nov-94		2	1	3	
finasteride	P	GBR	92	3	06/19/92	05/27/92	Sep-94		2	1	3	
fluvastatin		GBR	94	3	12/31/93	08/23/93	Jun-94		2	1	3	
fosinopril		GBR	91	3	05/16/91	07/03/90	Jul-92		2	1	3	
gabapentin	P	GBR	93	3	12/30/93	03/05/93	Dec-94		2	1	3	
hepatitis A vaccine - Havrix (m)		SUI	92	3	02/22/95	03/16/92	12/04/92		3	1	2	
idarubicin	P	GBR	90	3	09/27/90	11/29/89	Apr-91		2	1	3	

NEW DRUG NAME	PRIORITY ?	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
interferon gamma-1b	P	USA	91	3	12/20/90	10/07/92	Dec-92		1	2	3	
ketorolac - withdrawn GER 6/93 & FRA 12/93	P	ITA	90	3	11/30/89	06/08/90	Nov-91		1	2	3	
lanotrigine	P	IRE	90	3	12/27/94	10/24/91	Jun-93		3	1	2	
lanoprazole		FRA	92	3		02/23/94	Jun-93	10/02/92		3	2	1
lenograstim (G-CSF)		JPN	91	3		11/29/93	Oct-93	1991		3	2	1
levocabasone	P	DEN	91	3	11/10/93	01/09/95	Feb-93		2	3	1	
lorazepam		USA	92	3	12/31/91	04/11/94	Sep-93		1	3	2	
milrinone (iv)		HOL	90	3	12/31/87	01/25/94	May-93		1	3	2	
pac-bazal; Tazol (m)	P	USA	93	3	12/29/92	11/18/93	Nov-93		1	3	2	
peroxetone		GBR	91	3	12/29/92	12/11/90	Jun-92		3	1	2	
rifabutin	P	ITA	92	3	12/23/92	10/15/93	Nov-94		1	2	3	
risperidone	P	CAN	93	3	12/29/93	12/08/92	Dec-93		3	1	2	
sumatriptan	P	HOL	91	3	12/28/92	08/12/91	Dec-92		3	1	2	
tazobactam (combination)		FRA	92	3	10/22/93	12/02/92	Jul-93		3	1	2	
tenaflotacin - withdrawn WW 6/92		SWE	91	3	01/30/92	08/15/91	Mar-92		2	1	3	
torasemide (torsemide)		GER	93	3	08/23/93	04/26/94	Dec-91		2	3	1	
zalcitabine (ddC)	P	AUT	92	3	06/19/92	01/01/94	Jan-94		1	2	3	4
amlodipine		GBR	90	4	07/31/92	09/18/89	May-93	10/01/93	2	1	3	1
cefepodoxime		JPN	90	4	08/07/92	06/15/92	Sep-91	09/29/89	4	3	2	1
clarithromycin		IRE	90	4	10/31/91	04/09/91	Oct-90	03/29/91	4	3	1	2
didanosine (ddI)		USA	91	4	10/09/91	02/17/94	Aug-92	06/19/92	1	4	3	2
filgrastim (G-CSF)		USA	91	4	02/20/91	03/15/91	Jul-91	10/04/91	1	2	3	4
fluticasone		GBR	90	4	12/14/90	03/08/90	Oct-93	07/01/94	2	1	3	4
granisetron		SAF	91	4	12/29/93	11/14/91	Dec-94	01/21/92	3	1	4	2
isafarelin		USA	90	4	02/13/90	07/17/91	Jan-92	01/20/95	1	2	3	4
ondansetron	P	GBR	90	4	01/04/91	1990	Oct-90	01/19/94	3	1	2	4
penicillin	P	USA	92	4	10/11/91	01/25/93	Jun-93	04/01/94	1	2	3	4
terbinafine	P	JPN	93	4	04/08/94	06/07/94	Mar-95	1993	2	3	4	1
terbinafine		GBR	91	4	12/30/92	10/03/90	Dec-91	07/02/93	3	1	2	4

Appendix 2: New Drugs Approved in UK, not in USA

Approvals through April 1995

214 NCEs First Marketed in the World 1990-94

NEW DRUG NAME	IST. MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
acarbose	GER	90	3		06/28/93	Jun-90	10/01/93		2	1	3
amorolfine	GBR	91	3		06/10/91	Sep-92	10/01/93		1	2	3
bambuterol	SWE	90	2		08/04/92	Oct-91			2	1	
cabergoline	BEL	93	2		01/12/94	Jun-94			1	2	
carvedilol	GER	91	3		07/14/94	Oct-90	01/19/93		3	1	2
cefodizime	JPN	90	3		12/10/91	Mar-91	03/30/90		3	2	1
cefpirone	SWE	92	2		01/11/93		07/02/93		1	2	2
cefutien	JPN	93	3		04/13/94	Jun-93	1993		3	2	1
Centoxin - nebacumab - withdrawn WW	HOL	91	2		05/14/91	05/16/91			1	2	
cilazapril	SUI	90	3		10/26/90	Sep-91	09/28/90		2	3	1
Curosurf (tm) - poractant alfa	ITA	92	1		11/12/93				1		
epoetin beta	JPN	90	3		04/08/94	Apr-90	01/23/90		3	2	1
formestane	GBR	93	2		11/24/92	May-94			1	2	
glucagon rDNA	DEN	93	2		09/13/91	Mar-92			1	2	
lacidipine	ITA	91	1		12/10/91				1		
lanoprazole	FRA	92	3		02/23/94	Jun-93	10/02/92		3	2	1
lenograstim (G-CSF)	JPN	91	3		11/29/93	Oct-93	1991		3	2	1
lofexidine	GER	92	2		04/29/86	Aug-81			2	1	
Logiparin / Imnobep (tn's) - lmw heparin	DEN	91	2		06/05/92	May-92			2	1	
metoprenem	ITA	94	1		01/19/95				1		
moclobemide	SWE	90	2		06/12/91	Apr-91			2	1	
molgramostim (GM-CSF)	ARG	92	2		10/23/92	Apr-93			1	2	
Orgaran (tm) - glycosaminoglycans - danaparoid	HOL	92	1		04/14/93				1		
pumactant	GBR	90	1		04/11/94				1		
quinagolide	HOL	94	2		09/15/94	Nov-94			1	2	
remoxipride - withdrawn WW - 1994	DEN	90	1		08/22/90				1		

Appendix 2: New Drugs Approved in Germany, not in USA

214 NCEs First Marketed in the World 1990-94 Approvals through April 1995

NEW DRUG NAME	1ST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
sparfloxacin	JPN	93	2		12/13/94		1993		2		1
trandolapril	FRA	93	2		03/29/93	Mar-93			2	1	
tropisetron	HOL	92	2		10/28/92	Oct-93			1	2	

NEW DRUG NAME	1ST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
acarbose	GER	90	3		06/28/93	Jun-90	10/01/93		2	1	3
amorolfine	GBR	91	3		06/10/91	Sep-92	10/01/93		1	2	3
bambuterol	SWE	90	2		08/04/92	Oct-91			2	1	
cabergoline	BEL	93	2		01/12/94	Jun-94			1	2	
carvedilol	GER	91	3		07/14/94	Oct-90	01/19/93		3	1	2
cefepime	SWE	93	1			Jan-95				1	
cefetamet	MEX	92	2			Nov-94	01/19/93			2	1
cefodizime	JPN	90	3		12/10/91	Mar-91	03/30/90		3	2	1
ceftributen	JPN	93	3		04/13/94	Jun-93	1993		3	2	1
Centoxin - nebacumab - withdrawn WW	HOL	91	2		03/14/91	05/16/91			1	2	
cilazapril	SUI	90	3		10/26/90	Sep-91	09/28/90		2	3	1
epoetin beta	JPN	90	3		04/08/94	Apr-90	01/23/90		3	2	1
floxacin	SUI	92	2			Jan-95	07/02/93			2	1
formestane	GBR	93	2		11/24/92	May-94			1	2	
glucagon rDNA	DEN	93	2		09/13/91	Mar-92			1	2	
iloprost	GER	92	1			Mar-92					
lansoprazole	FRA	92	3		02/23/94	Jun-93	10/02/92		3	2	1
lenograstim (G-CSF)	JPN	91	3		11/29/93	Oct-93	1991		3	2	1
lofexidine	GER	92	2		04/29/86	Aug-81			2	1	
Logiparin / Innobep (m's) - lmw heparin	DEN	91	2		06/05/92	May-92			2	1	
mitelfosine	GER	93	1			Oct-92				1	

Appendix 2: New Drugs Approved in Japan, not in USA

214 NCEs First Marketed in the World 1990-94

Approvals through April 1995

NEW DRUG NAME	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
moclobemide	SWE	90	2		06/12/91	Apr-91			2	1	
molgramostim (GM-CSF)	ARG	92	2		10/23/92	Apr-93			1	2	
moxonidine	GER	91	1			Jan-91				1	
nisoldipine	JPN	90	2			Apr-90	01/23/90			2	1
pantoprazole	GER	94	1			Aug-94				1	
pertussis vaccine acellular - primary	ITA	93	1			03/17/95				1	
quinagolide	HOL	94	2		09/15/94	Nov-94			1	2	
reviparin	GER	93	1			Apr-93				1	
sapropterin	JPN	92	2			Aug-82	1992			1	2
sertaconazole	SPA	92	1			Apr-94				1	
somatomedin-1 (GF-1); Igcf (tn)	SWE	94	1			Mar-95				1	
trandolapril	FRA	93	2		03/29/93	Mar-93			2	1	
tropisetron	HOL	92	2		10/28/92	Oct-93			1	2	

NEW DRUG NAME	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
acarbose	GER	90	3		06/28/93	Jun-90	10/01/93		2	1	3
actarit	JPN	94	1				1994				1
amorolfine	GBR	91	3		06/10/91	Sep-92	10/01/93		1	2	3
amproxicam	JPN	94	1				1994				1
angiotensin II - human	JPN	94	1				1994				1
auracetam	JPN	93	1				1993				1
arbekacin	JPN	90	1				09/28/90				1
argatroban	JPN	90	1				01/23/90				1
barbidipine	JPN	92	1				1992				1
benidipine	JPN	91	1				1991				1
beraprost	JPN	92	1				1992				1

NEW DRUG NAME	1ST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
betamethasone butyrate propionate	JPN	94	1				1994				1
butenafine	JPN	92	1				1992				1
carvedilol	GER	91	3	07/14/94	Oct-90		01/19/93		3	1	2
cefdinir	JPN	91	1				1991				1
cefditoren	JPN	94	1				1994				1
cefetamet	MEX	92	2			Nov-94	01/19/93			2	1
cefodizime	JPN	90	3			Mar-91	03/30/90		3	2	1
cefotiam hexetil	JPN	91	1				1991				1
cefpime	SWE	92	2		01/11/93		07/02/93		1		2
cefbuten	JPN	93	3		04/13/94	Jun-93	1993		3	2	1
celmoleukin (interleukin-2)	JPN	92	1				1992				1
cilazapril	SUI	90	3		10/26/90	Sep-91	09/28/90		2	3	1
clospiramine	JPN	91	1				1991				1
cytarabine ocfosfate	JPN	93	1				1993				1
deprodone	JPN	92	1				1992				1
ecabet	JPN	94	1				1994				1
efonidipine	JPN	94	1				1994				1
emedastine	JPN	93	1				1993				1
epalrestat	JPN	92	1				1992				1
epinastine	JPN	94	1				1994				1
epoetin beta	JPN	90	3			Apr-90	01/23/90		3	2	1
floxacin	SUI	92	2		04/08/94	Jan-95	07/02/93			2	1
gusperimus (deoxyspergualin)	JPN	94	1				1994				1
imidapril	JPN	94	1				1994				1
interferon gamma-1a	JPN	92	1				1992				1
irinotecan	JPN	94	1				1994				1
lanocanazole	JPN	94	1				1994				1
lanoprazole	FRA	92	3		02/23/94	Jun-93	10/02/92		3	2	1
lenograstim (G-CSF)	JPN	91	3		11/29/93	Oct-93	1991		3	2	1

NEW DRUG NAME	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
levofloxacin	JPN	94	1				1994				1
mandipine	JPN	90	1				06/29/90				1
mirimostim (G-CSF)	JPN	91	1				1991				1
mofezolac	JPN	94	1				1994				1
nadifloxacin	JPN	93	1				1993				1
nartograsum	JPN	94	1				1994				1
nazasetron (azasetron)	JPN	94	1				1994				1
nemonapride	JPN	91	1				1991				1
neticonazole	JPN	93	1				1993				1
nisoldipine	JPN	90	2			Apr-90	01/23/90			2	1
panipenem (combination)	JPN	94	1				1994				1
pemirolast	JPN	91	1				1991				1
pilsicainide	JPN	91	1				1991				1
pimobendan	JPN	94	1				1994				1
polaprezinc	JPN	94	1				1994				1
porfimer	HOL	94	1				10/05/94				1
propagermanium	JPN	94	1				1994				1
pro-urokinase	JPN	92	1				1992				1
rebamipide	JPN	90	1				09/28/90				1
romurtide	JPN	91	1				1991				1
sapropterin	JPN	92	2			Aug-82	1992			1	2
sargogrelate	JPN	93	1				1993				1
sevoflurane	JPN	90	1				01/23/90				1
sintetase - withdrawn - patent dispute	JPN	91	1				1991				1
sobuzoxane	JPN	94	1				1994				1
sorivudine - halt shipment 10 / 93 for safety	JPN	93	1				1993				1

NEW DRUG NAME	IST MKT	SCRIP YEAR	NUMBER OF APPROVALS	USA DATE	UK DATE	GER DATE	JPN DATE	USA RANK	UK RANK	GER RANK	JPN RANK
sparfloxacin	JPN	93	2		12/13/94		1993		2		1
tacalcitol	JPN	93	1				1993				1
tamsulosin	JPN	93	1				1993				1
tazanolast	JPN	90	1				09/28/90				1
teceleukin (interlukin-2)	JPN	92	1				03/27/92				1
temocapril	JPN	94	1				1994				1
tilisolol	JPN	92	1				1992				1
tisokinase	JPN	91	1				1991				1
torientin	JPN	94	1				1994				1
tosufloxacin	JPN	90	1				01/23/90				1
unoproston	JPN	94	1				1994				1
vesmaruone	JPN	90	1				06/29/90				1
voglibose	JPN	94	1				1994				1
Z-100 (maruyama vaccine)	JPN	91	1				1991				1
zalioprofen	JPN	93	1				1993				1
zincosianin	JPN	94	1				1994				1

CMR NEWS

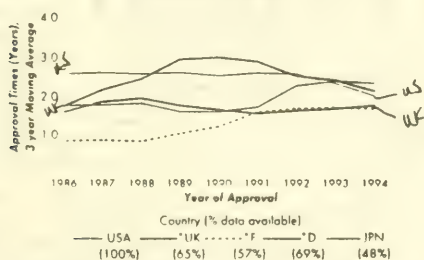
Volume 14 Number 6

Spring 1996

International Regulatory Review Times Converge

Companies can expect compounds submitted for a product licence in the late 1990s to spend, on average, between 1.5 and 3 years in the review process, depending on the authority. Preliminary data from an ongoing CMR survey show that there are still differences between the authorities in the average total times taken to review Marketing Applications for New Chemical Entities (NCEs), but the magnitude of the differences is decreasing.

Figure 1
Total Review Times in the USA, the UK,
France, Germany and Japan
(Preliminary data)



*UK: The 3 authorisations in Europe in 1993 and the registration procedure have been excluded

Regulatory review times are beginning to converge on a mean of around 2 years in at least five countries – the USA, the UK, Japan, France and Germany. This represents a decrease for both the USA and Germany from averages of nearly 3 years in 1990. In contrast, review times in Japan and France have increased, while the UK has remained fairly consistent (Figure 1). In other major markets the review times are moving towards 2.5 years (Figure 2).

Mean or median?

Although the mean provides the average for all approvals, it can be influenced by outliers. The median may therefore be more representative of the actual time compounds are spending in the approval process. The median approval times for 1994 and 1995 indicate that the total time spent in the review process was similar for France, the UK, the USA, Spain and Germany, being in the region of 1.5 years, with Japan, Italy and Canada still

taking 2 or more years (Figure 3). Although the data sets are not complete, the number of compounds available for analysis in 1994 and 1995 is similar in each market.

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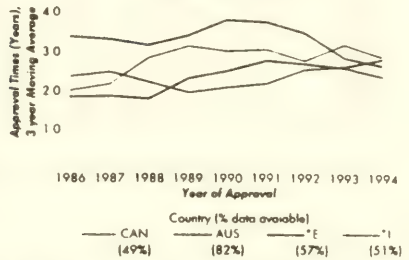
Apples and pears:

There are limitations to the conclusions that can be drawn from these data, particularly as the same compounds were not necessarily being reviewed by each authority. In order to make true comparisons between authorities, it is important to ensure that like is being compared with like, in terms of both the compounds and the timeframe during which they were submitted.

Examining a group of compounds submitted to both the UK and the USA, within a 6-month period, still shows considerable differences between the total review times (Figure 4). Within the latter half of the 1980s, the UK was consistently quicker than the USA at reviewing the same compounds. Over this period, the USA took longer than the UK to review 17/23 of the compounds in this cohort, with the difference being more than 1 year for 11

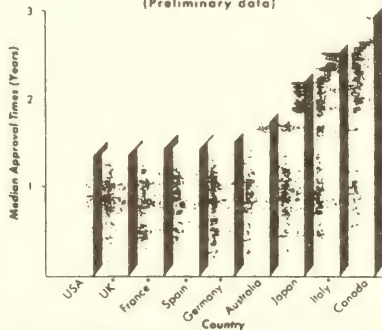
Figure 2

Total Review Times in Canada, Australia, Spain and Italy (Preliminary data)



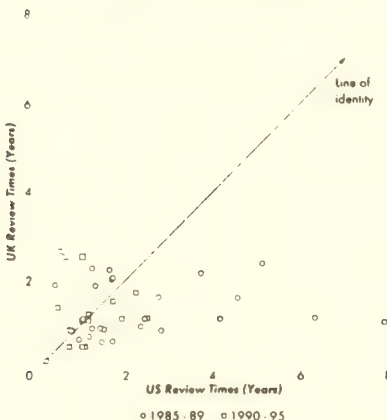
*NB: The 3 authorisations in Europe in 1995 via the centralised procedure have been excluded.

Median Approval Times for Compounds Approved 1994/95 (Preliminary data)



*NB: The 3 authorisations in Europe in 1995 via the centralised procedure have been excluded.

Figure 4 Regulatory Review Times in the USA and the UK for compounds submitted in both countries within 6 months



compounds. In contrast, the UK took longer to review 6 compounds. This situation has changed in the 1990s with 6/19 compounds submitted to both authorities being reviewed in virtually the same time. Although the USA took

longer than the UK to review 9 compounds, the difference was more than 1 year for only 2 of these.

Can the review process be improved?

While the measurement of total review times provides an indication of how long compounds are spending in the review process, it does not take into consideration factors such as the resourcing and workload of each agency, the type of compounds, the quality of the dossiers or the response times of the companies to questions raised. These and other factors were discussed at a recent CMR workshop, and suggestions were made for ways in which industry and regulatory authorities can work together to improve the review process (see pages 3-5).

Neil McAuslane

LETTER FROM MICHAEL A. FRIEDMAN, M.D., DEPUTY COMMISSIONER FOR OPERATIONS, DEPARTMENT OF HEALTH AND HUMAN SERVICES

February 5, 1996

Gerald J. Mossinghoff
President
Pharmaceutical Research and
Manufacturers of America
1100 Fifteenth Street, N.W.
Suite 900
Washington, D. C. 20005

Dear Mr. Mossinghoff:

The recent PhRMA press release, dated January 17, 1996, and your accompanying statement have led to some misunderstandings in the media and on Capitol Hill about the Food and Drug Administration's report, "Timely Access to New Drugs in the 1990s: An International Comparison."

Some have not realized that your organization's analysis was not based on the same data set as that relied upon by the FDA. The agency looked at 214 new molecular entities (NMEs) introduced anywhere in the world between January 1990 and December 1994. Your statements -- that were critical of the FDA analysis -- were based, however, on 126 NMEs approved by the FDA during this time period. While there is some overlap between the two sets of drugs, they really are entirely different sets. PhRMA's set of 126 drugs obviously does not encompass the entire list of 214 drugs reviewed by the FDA. Nor does the FDA set of 214 drugs include all of PhRMA's 126 drugs since some of these drugs had been introduced long before 1990.

PhRMA's data -- like all data -- can be appropriately analyzed in several different ways; that is why FDA presented its data from several different perspectives. In fact, the PhRMA data -- like the FDA report -- show that the U.S. is indeed a world leader when it comes to making available to Americans many of the newest and most important therapies.

Let me clarify what FDA chose to look at and why. FDA chose to look at all new drugs introduced anywhere in the world between 1990 and 1994 because of the concern that somehow patients in the U.S. were being shortchanged. It is truly the latest data because it is new drugs introduced worldwide during this time period. Finally, it is a data base outside of FDA's control because, again, these are drugs introduced anywhere in the world.

The NMEs that PhRMA discusses are those being approved for the first time in the U.S. They, in fact, do not represent the newest new drugs; some have indeed been approved first elsewhere. We understand that; surely PhRMA understands that.

Other interested parties, however, are confused. PhRMA should try to do a better job making clear the difference.

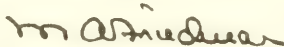
Finally, let's look at PhRMA's data. Your conclusion is that compared to all of the rest of the world, FDA comes in second. We will take a look just at the 1995 approvals, but as PhRMA knows, this analysis holds true for the 1990 to 1994 period. In 1995, there were 28 NMEs approved by the FDA, and PhRMA found that 10 were approved first in the U.S. and 18 were approved elsewhere first. PhRMA could just as easily have found that of those 28 NMEs, 3 were first approved in Belgium and 25 were approved elsewhere first; or 1 was first approved in Canada and 27 were approved elsewhere first. PhRMA has come to the startling conclusion that no one country approves all drugs first, and compared to all of the rest of the world, every country comes in second. In fact, here is a list of which country approved the 28 NMEs first according to PhRMA:

- 10 in the United States
- 3 in Belgium
- 3 in Germany
- 2 in Japan
- 2 in the United Kingdom
- 2 in Sweden
- 1 in The Netherlands
- 1 in Italy
- 1 in Spain
- 1 in Canada
- 1 in Czechoslovakia
- 1 in France

Also, four of the drugs approved elsewhere first, were only approved in those countries in 1995 according to PhRMA, and then approved in the U.S. in that same year. The U.S. patients therefore had timely access to those drugs as well.

As this debate goes forward, the U.S. pharmaceutical industry will be best served if its trade association maintains its credibility.

Sincerely yours,



Michael A. Friedman, M.D.
Deputy Commissioner for Operations

In terms of your specific question regarding medical devices, there are a number of points to consider when addressing the issue of availability of medical devices in foreign countries and the United States. First, the Medical Device Amendments require that any manufacturer that intends to market a new medical device must provide information to the FDA that demonstrates that the device is safe and effective.

Second, until the inception of the European Union system, devices were only marginally regulated or not regulated at all in many foreign countries. Regulatory oversight in foreign countries was extremely limited, and consequently, reliable information about the market performance of devices or the risks they may have posed to patients is not available. For this reason, it is extremely important to realize that simply because a medical device is used in Europe does not necessarily mean that the device is as safe or more safe or effective than ones currently on the market in the U.S. For example, the Shiley 70 degree heart valve was allowed on the market in Europe but was prohibited by the U.S. This valve later proved to be intrinsically flawed and was responsible for a number of patient deaths. A recent example of misinformation being provided to the public about a type of medical device is the coronary stent. Currently, there are two stents that are commercially available in the U.S. There are newer designs of stents that are being used in Europe. There have been reports to the public that the newer designs of stents have "lifesaving" potential. However, it has yet to be demonstrated that stenting reduces mortality when compared to angioplasty. Further, no data exists to support the idea that one stent design will increase survival over another design.

Third, there are options available to patients that could benefit from treatment with investigational medical devices. We recently reaffirmed the policy regarding continued availability of investigational devices during the intervening period between completion of the clinical study and approval of the marketing application. Under this policy, Investigational Device Evaluation sponsors are permitted to continue to enroll subjects at a pre-determined rate while a marketing application is being prepared by the sponsor or reviewed by ODE if two conditions are met. One condition is that there is a public health need for the device, and secondly, preliminary evidence exists that the device is likely to be effective and no significant safety concerns have been identified for the proposed indication.

Once a preliminary review of the data for either the IDE, 510(k), or PMA indicates that there is evidence of safety and effectiveness, a sponsor may propose to conduct such an extended clinical investigation of the device via submission of an IDE supplement. The extended investigation may be conducted, for example, to obtain confirmatory evidence of safety and effectiveness in a subpopulation, to support net indications for use, to identify and quantify adverse reactions, to address long-term effects of the device, to support additional labeling claims, or to confirm that minor changes made to the device design do not substantially impact safety and effectiveness. This important policy allows the collection of additional safety and effectiveness data in support of the marketing application, permits new questions regarding the investigational device to be addressed during this intervening period, and allows uninterrupted and expanded access to potentially safe and effective devices. I will provide a policy memorandum on investigational device availability, for the record:

Memorandum

Date • MAY 10 1995

From Director, Office of Device Evaluation (ODE)

Subject Investigational Device Exemption (IDE) Policy Which Permits Continued Access to Investigational Devices While a Marketing Application is Being Prepared or Reviewed

To ODE Review Staff

It has recently been brought to my attention that the Office policy regarding continued availability of investigational devices during the period between completion of the clinical study and approval of the marketing application requires clarification. In the near future, a blue book memorandum will be developed which will provide specific guidance on this topic. In the mean time, however, ODE's reviewing divisions should use the general principles presented below as a guideline for developing appropriate criteria for their own use.

ODE has traditionally permitted sponsors of clinical investigations to continue to enroll subjects at a pre-determined rate while a marketing application is being prepared by the sponsor or reviewed by the Office if there is: (1) a public health need for the device or (2) if there is preliminary evidence that the device is likely to be effective and no significant safety concerns have been identified for the proposed indication. Such a policy is scientifically sound as it allows the sponsors to collect additional safety and effectiveness data in support of the marketing application or to address new questions regarding the investigational device during this intervening period. This approach is also administratively appropriate as the preparation and review times for a marketing application can be lengthy; and thus, it could be contrary to the public health to prevent access to these potentially safe and effective new devices during a lengthy evaluation period.

Once a preliminary review of the data (IDE, 510(k), or PMA) indicates that there is evidence of safety and effectiveness, a sponsor may propose to conduct an "extended" clinical investigation of the device. An extended investigation may be conducted for a number of reasons. For example, a sponsor may propose an extended trial for the same indication for use as studied under the IDE and use the same study protocol to provide confirmatory evidence of safety and effectiveness. A modified clinical protocol may be used to better define safety and effectiveness in a subpopulation, to support new indications for use or new modalities of use for the device, to identify and quantify adverse reactions, to address long-term effects of the device, to support additional labeling claims, or to confirm that minor changes made to the device design or to the conditions under which the device will ultimately be used do not substantially impact safety and effectiveness.

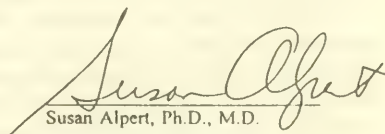
A request for an extended investigation must be submitted by the sponsor of the IDE in writing as a supplement to the IDE. When reviewing a request for an extended investigation from the sponsor, the sponsor's justification for the extension, the preliminary safety and effectiveness data (IDE, 510(k) or PMA), the risks posed by the device, the proposed rate of continued enrollment, the proposed objectives for the extended study, the sponsor's progress toward submission of the marketing application, and/or ODE's progress in the review of the marketing application should be considered. All of these factors may influence ODE's decision to approve, approve with modifications, or disapprove the proposed protocol for this intervening period between completion of the core clinical investigation and approval of the marketing application. The above factors should also be considered by ODE when deciding upon an appropriate rate of enrollment, number of investigators, and number of investigational sites for the study during this stage of product development. Finally, a sponsor who has been negligent in his monitoring responsibilities or who has exhibited other unresolved compliance problems would not be permitted to participate in an extended investigation.

An investigation conducted under the provisions of this policy must still be conducted in accordance with the IDE, IRB, and Informed Consent regulations (21 CFR 812, 56, and 50,

respectively). FDA may withdraw approval for the extended investigation for any of the reasons identified in 21 CFR 812.30 (b), if the device is being commercialized, or if there is not satisfactory progression towards submission of the marketing application or towards approval of the marketing application. As in the withdrawal of approval of an IDE, however, ODE must make every attempt to resolve the issue(s) with the sponsor, must notify the sponsor in writing of the issue(s), and must notify the IDE Staff and the Director's office before proceeding with this course of action.

Effective Date

This memorandum is effective immediately.



Susan Alpert, Ph.D., M.D.

THE BOTTOM LINE IS TOTAL DEVELOPMENT TIME

Question. Dr. Kessler, many would contend that the most important measure of the FDA's performance is how well the agency functions in bringing safe and effective new products to the marketplace quickly. Your critics note that the ever-increasing regulatory requirements imposed by the FDA have lengthened the time it takes for companies to bring a completed application to the FDA, and that, as a result, the FDA has caused total product development time to increase even while the agency appears to be reducing NDA review times. Dr. Kessler, isn't it misleading to focus exclusively on the agency's NDA review times? Shouldn't we instead focus on whether the FDA is helping to foster an environment in which innovative advances in medical technology can be brought to market more quickly in order to benefit patients?

Answer. FDA has said many times, particularly in the context of the FDA "reform" legislation currently being considered in both the Senate and the House, that the emphasis should be on getting safe and effective drugs to patients faster, rather than simply on new drug application (NDA) review times. The NDA review time is a short part, about 10 percent, of the drug development process and adds relatively little additional time to the overall drug development time. Furthermore, the success of the Prescription Drug User Fee Act (PDUFA) program has in most cases addressed the problem of prolonged review times.

While we at the FDA are committed to continuing to meet our goals and to find ways to improve our reviews in both speed and quality, we have argued against the excessive emphasis on review times that leads to the diversion of attention from the drug development process. We argue instead for enhanced collaboration between the Agency and a manufacturer early in the drug development process. We must mutually recognize, however, that such collaboration is an investment in public health. Like any investment, some resources must be committed before dividends can be enjoyed. In the case of early collaborative effort, the resources required from the Agency are the time and expertise of the medical, biopharmaceutical and toxicological, and chemistry

reviewers. The FDA has invested internationally as well as internally in collaboration to decrease total drug development time, by strongly supporting and promoting the International Conference on Harmonization (ICH). The ICH, composed of regulatory and industry officials representing the U.S., the European Union and Japan, is working to harmonize the format and content of applications for all new drug and biotechnology products. The result of ICH agreements will reduce redundant requirements and facilitate new product approvals in the global drug development arena.

In the area of medical devices, we have made major improvements over the past two years in responding to the challenge to be more efficient and productive in carrying out our review activities. For example, the number of PMA and IDE approvals has increased, and the backlog of 510(k) submissions and average review times for 510(k)s have been reduced. With the reduction in review times, an environment now exists in which advances in medical technology can be made available more quickly to those who need these devices for better health, physical functioning and comfort.

There are options available to those patients who could benefit from treatment with investigational medical devices. Last year we reaffirmed the policy regarding continued availability of investigational devices during the intervening period between completion of the clinical study and approval of the marketing application. Under this policy, Investigational Device Exemption (IDE) sponsors are permitted to continue to enroll subjects at a pre-determined rate while a marketing application is being prepared by the sponsor or reviewed by FDA if there is a public health need for the device, or preliminary evidence that the device is likely to be effective and no significant safety concerns have been identified for the proposed indication. Once a preliminary review of the data from a premarketing submission (IDE, 510(k), or PMA) indicates that there is evidence of safety and effectiveness, a sponsor may propose to conduct such an "extended" clinical investigation of the device via submission of an IDE supplement. The extended investigation may be conducted, for example, to obtain confirmatory evidence of safety and effectiveness in a subpopulation, to support new indications for use, to identify and quantify adverse reactions, to address long-term effects of the device, to support additional labeling claims, or to confirm that minor changes made to the device design do not substantially impact safety and effectiveness. This important policy allows the collection of additional safety and effectiveness data in support of the marketing application, permits new questions regarding the investigational device to be addressed during this intervening period, and allows uninterrupted access to potentially safe and effective devices.

DELINQUENT RULEMAKINGS

Question. Dr. Kessler, I want to make it perfectly clear, I support the core mission of FDA to protect public health. I understand the need for, and support, FDA regulations that protect public health. I do not support over-regulation or regulations that do not make sense. It is because I understand how important regulation is to FDA's performance of its core mission, that I am deeply troubled by FDA's failure to promulgate its regulations in a timely manner. The following examples cause me great concern:

FDA has proposed regulations to protect the safety of the nation's blood supply by, among other things, requiring blood establishments to quarantine blood received from HIV infected donors. Over seven years after FDA started working on these regulations, FDA still has not issued rules.

FDA has announced that it will propose regulations on the use of medical foods, which have therapeutic benefits for seriously ill and elderly Americans. Over six years after FDA announced the need for this rule, FDA still has not even proposed regulations. You are not even close to issuing rules.

FDA has proposed regulations that would require prescription drug labeling to contain important safety information for older Americans. Over five years later, FDA still has not issued rules.

As mandated by the Mammography Quality Standards Act of 1992, FDA is required to make sure mammography facilities, equipment and personnel can properly detect breast cancer in American women. Over three and a half years later, FDA has only recently proposed regulations. You are not even close to issuing rules.

The Safe Medical Devices Act of 1990 ordered FDA, within one year of enactment, to propose regulations to encourage the development and use of medical devices to help Americans who suffer from rare diseases. Over four years after enactment, FDA still has not issued rules.

The Safe medical Devices Act of 1990 ordered FDA to establish regulations requiring the prompt reporting of medical devices that pose a risk to public health. Over four years after enactment, FDA still has not issued rules.

FDA has proposed regulations to prevent the sale of counterfeit drugs. Over three years after FDA first announced this rulemaking, FDA still has not issued rules.

FDA has proposed regulations that would help prevent the transmission of AIDS and hepatitis through the transplantation of human tissue. Over two years after FDA proposed these regulations, FDA still has not issued rules.

FDA has proposed regulations to disqualify clinical investigators engaging in fraudulent activity. Over two years later, FDA still has not issued rules.

As mandated by the Nutrition Labeling and Education Act Amendments of 1993, FDA has proposed regulations to lessen the cost of the regulations on small businesses. Over two and half years after enactment, FDA still has not issued rules.

Dr. Kessler, this record of failure by your agency to promulgate regulations in a timely manner causes me great concern. What steps will you take to ensure that FDA does not let regulations, like food additive, human drug, medical device, and animal drug petitions languish for years in the agency?

Answer. In the late 1980's, there were valid criticisms that FDA took far too long to complete necessary rulemaking. Since 1990, we have made significant efforts to improve the pace and timeliness of its rulemaking. During the 1990's, many significant regulations have been proposed and finalized expeditiously, such as the massive effort to revamp the food label and new procedures to speed access and approval of life-saving new drugs. Last year alone, FDA published 156 proposed or final regulations in the Federal Register. Although many of those reflected product approvals, such as approvals of animal drugs or food additives, others were new, significant public health regulatory initiatives -- such as implementing the Mammography Quality Standards Act, new procedures to

ensure the safety of seafood, deregulatory and streamlining initiatives under the Vice President's National Performance Review, and a proposal to protect Amercian children from tobacco promotion and sale. For the rulemakings that you specifically mentioned, some are already published or very close to publication, and others have not been published due to the fact that the agency has limited resources, and these rulemakings were not established as high priorities.

Let me discuss the specific examples that are referenced in your question. We expect that the final rule on blood "lookback" will be published very soon in conjunction with a companion rule developed by the Health Care Financing Agency. However, this was not a critical regulation for the agency to publish because, due to the proposed rule, virtually all blood facilities currently have lookback procedures in place. An Advanced Notice of Proposed Rulemaking is currently pending on Medical Foods. This rulemaking has no legal deadlines. This has been a very complicated issue for the Agency that has been debated for several years. As more information becomes available on this issue, we will progress toward publication. A final rule on Geriatric Labeling is expected to be published by early summer. This has been a complicated issue because the proposed implementation schedule was originally viewed by the industry as overly burdensome. FDA has redrafted the schedule to be phased in over a longer time to accomodate concerns expressed during the comment period. A regulation on Humanitarian Use Devices has a target publication date of June 1996 and has been identified as the current top priority by FDA's Center for Devices and Radiological Health. We published a final rule on Medical Device User Facility and Manufacturer Reporting on December 11, 1995. FDA published an interim final rule on December 14, 1993, regarding Human Tissue Regulation. The basic provisions of this interim rule have been effective and have not changed since then. The final rule, which clarifies and modifies some provisions, will be published within this year. With regard to Disqualification of Clinical Investigators, although it has long been intended that FDA have regulations specifying the disqualification procedure for medical device investigations, given the current projects also pending at the Agency, this rule has not been designated as a priority rule. The final rule is near completion in the Center for Devices and Radiological Health. The final rule for the Small Business Exemption under the Nutrition Labeling and Education Act was signed by Secretary Shalala on April 4, 1996, and is currently undergoing formal review by OMB. With regard to Mammography Quality Standards, FDA published standard-setting interim rules on December 21, 1993, and amended them on September 30, 1994. In issuing the interim regulations, FDA attempted to balance the pressing need to put national mammography standards into effect with the Agency's concern that the facilities be provided a reasonable amount of time to comply with these standards. Five proposed rules regarding mammography standards were published on April 3, 1996. Finally, you mention proposed rules related to the prevention of the sale of counterfeit drugs. The Agency has never worked on a regulation that fits that description.

QUESTIONS SUBMITTED BY SENATOR BURNS

Question. Life is a matter of priorities and making difficult choices. If you had to choose just one single priority for the FDA among the agency's many missions and goals, what would it be?

Answer. As the nation's oldest and principal consumer protection agency, FDA's mission is to protect and promote the health of the American people. FDA is responsible for ensuring that foods are safe, wholesome, and sanitary; human and veterinary drugs, biological products, and medical devices are safe and effective; and cosmetics and electronic products that emit radiation are safe. If you are asking me to pick coverage of just one of these areas, that would be impossible. Each of these categories of products touch millions of Americans. To eliminate our role in any of these areas would result in untold injuries and suffering, and loss of life.

Question. How have you allocated the resources at FDA to most efficiently and effectively serve the most important priority?

Answer. The total budget of the FDA is focused on our mission of protecting the health of the American people. Our budget is divided into categories that reflect this mission: Foods, Human Drugs, Biologics, Animal Drugs, and Medical Devices. During this time of constant and declining budgets, we have worked hard to maintain a balance of resources so that all agency priorities are addressed to the most efficient and effective extent possible.

Question. The FDA has been mandated by Congress to meet statutory product review and approval times. It is my understanding that the FDA is still not meeting those deadlines. Can you testify, category by category, how overdue the FDA is in each area that it has review and approval authority?

Answer. The categories you refer to would be human drugs, animal drugs, foods, biologics, and medical devices. Let me discuss each in turn.

For human drug products, we categorize the applications as New Drug Applications (NDAs), for innovators' products or Abbreviated New Drug Applications (ANDAs or AADAs), for generic products. For NDAs, as of September 30, 1995, there were 165 applications pending, of which 14 were overdue. For user fee applications, the due date is the user fee goal date as agreed by Congress, the pharmaceutical industry and the FDA at the time of PDUFA enactment. For pre-user fee applications -- those applications received prior to September 1, 1992 -- the due date is calculated by the regulatory clock.

For generic products, as of September 30, 1995, there were 338 ANDAs and 44 AADAs pending. Of those, 35 ANDAs were pending for more than 180 days. These numbers represent actual counts of original applications received under the new ANDA/AADA submission policy that went into effect January 1, 1991, also known as the new counting system. This policy allows certain variations in drug product, multiple strengths, colors, to be included in a single application.

In most cases, we do meet the statutory time frame of 180 days to review new animal drug applications. If the time frame is not met, it is often by mutual agreement between FDA and the applicant, as allowed by the statute.

When FDA finds that an application is inadequate or incomplete, it issues an "incomplete" letter describing to the applicant the deficiencies in the application. We consider the application to be voluntarily withdrawn by the applicant at the time the "incomplete" letter is issued. When the applicant has gathered the required information and prepared a response, the application is then resubmitted, or reactivated. The statutory time frame of 180 days is applied to the "reactivated" application, and we again make the determination of whether the application can be approved. It nearly always takes more than one of these cycles before an application is found to be approvable. As a practical matter, and because of this process, we very rarely have the much more formal and time-consuming process of issuing a Notice of Opportunity for a Hearing for an application that is found to be inadequate or incomplete. An animal drug sponsor would request the hearing process only in those rare instances where after repeated efforts at resolving issues FDA remains convinced that the application is not approvable and the sponsor believes that it is. It may take several years from the initial submission for an application to be approved, but this is not a matter of meeting statutory time frames. It is a matter of the adequacy and quality of the information in the application that will support the statutory requirements of safety and effectiveness of the new animal drug for its intended use.

Sections 409 and 721 of the Federal Food, Drug, and Cosmetic Act provide that orders shall be issued within 180 days of the date of filing of food additive and color additive petitions, respectively. Immediately after passage of the Food Additives Amendment, FDA promulgated implementing regulations, through rulemaking on which all parties have an opportunity to comment, that provide that if a petition is deficient and is amended with new information, the statutory clock is started anew. Comparable provisions were promulgated following the passage of the Color Additive Amendments of 1960. Thus, we classify as "overdue" those complete petitions that have been under review at FDA for more than 180 days after the initial filing of the petition, or where applicable, after the submission of a substantive amendment. Citizen Petitions and Generally Recognized As Safe (GRAS) Petitions do not have statutory review and approval times.

As of May 3, 1996, the total number of food and color additive petitions -- not including Citizen and GRAS Petitions -- that have been submitted to FDA and for which no final action has been taken is 180. Of these 180, 55 are awaiting submission of information from the petitioner to correct significant deficiencies in the petition, and are not under review by FDA. Therefore, there are 125 filed petitions in review status. Of these 125, 71 have been at FDA for 180 days or more. In some cases, the review of the petition is complete. However, an approval is not effective until an order is issued and published in the Federal Register, a process that takes several weeks or more. Thus, some of these documents are in a queue awaiting publication.

Last year we testified about the food and color additives review process at a hearing before the Subcommittee on Human Resources and Intergovernmental Relations of the House of Representatives Committee on Government Reform.

At that time, we noted that one reason for the often lengthy review time for petitions was the sizable inventory of pending petitions, and that we could significantly improve the timeliness of petition review only if that inventory were reduced. We presented a comprehensive plan to make administrative and management changes to reform the petition review process, to substantially reduce the inventory of pending petitions, and to establish performance goals for timely petition review. Since then, we have been concentrating our efforts on reducing the inventory of pending petitions and have begun to make strides in doing so. For example, whereas there are presently 180 food and color additive petitions in the total inventory, the comparable number at the time of the hearing was 204. This progress was made even though some 50 new petitions were received in the interim. We expect to continue our efforts to substantially reduce the inventory so that newly submitted petitions can be reviewed promptly, and are committed to meeting our performance goals for significantly improving timeliness of review.

In the area of biologics, we have either met or exceeded all of the Prescription Drug User Fee Act of 1992 (PDUFA) review goals. Under PDUFA, the Agency committed itself to eliminate the overdue backlog of PDUFA-defined product license applications (PLAs), establishment license applications (ELAs), and PLA/ELA supplements within 24 months of initiation of user fees. "Backlog" was defined in the PDUFA commitments as any application that was overdue on October 1, 1992. In the case of biologics applications, "overdue" was defined as having no activity in the 12 months prior to October 1, 1992. FDA met the goal of eliminating the PDUFA-defined backlog of PLAs, ELAs, and PLA/ELA supplements before July 2, 1995. Therefore, there are no overdue biologics applications.

For medical devices, the number of overdue Premarket Notifications (510(k)s) and Premarket Approval Applications (PMAs) is defined as those that have been under review in the current review cycle for over 90 and 180 days, respectively. The number of overdue PMA Supplements and Investigational Device Exemptions (IDEs) -- both Originals and Amendments -- is defined as those that have been under review in the current review cycle for over 180 and 30 days, respectively. "Current review cycle" means the most recent time period in which the review clock has been started and an application is under review. There are a number of scenarios under which this review clock is stopped and re-started. Depending on the action causing the clock to be stopped, the downtime accrues to either FDA or the applicant. I would like to provide, for the record, some tables which contain numbers on overdue applications.

[The information follows:]

Table 1. Performance Levels for 510(k)s: FY 90 - FY 96

Fiscal Year	Number of Applications Received	Number Found Substantially Equivalent ²	Number Pending	Number Overdue ³
FY 90	5,831	4,748	1,900	0
FY 91	5,770	4,294	2,291	0
FY 92	6,509	3,776	3,951	331
FY 93	6,288	4,007	5,157	1,894
FY 94	6,434	5,498	4,374	460
FY 95	6,056	5,594	2,450	9
FY 96 ¹	2,630	2,384	2,158	3

¹ Data through 2nd quarter FY 1996.

² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of substantially equivalent decisions issued during each fiscal year.

³ Number of 510(k)s under review for more than 90 days in the current cycle at the end of the fiscal year.

Table 2. Performance Levels for PMAs: FY 90 - FY 96

Fiscal Year (FY)	Number of Applications Received	Number of Approvals ²	Number Pending	Number Overdue ³
FY 90	79	47	116	5
FY 91	75	27	135	2
FY 92	65	12	164	35
FY 93	40	24	150	45
FY 94	43	26	139	22
FY 95	39	27	125	26
FY 96 ¹	19	19	113	20

¹ Data through 2nd quarter of FY 1996.

² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of approvals issued during each fiscal year.

³ Number of PMAs under review for over 180 days in the current cycle.

Table 3. Performance Level for PMA Supplements: FY 90 - FY 96

Fiscal Year (FY)	Number of Applications Received	Number of Approvals ²	Number Pending	Number Overdue ³
FY 90	660	700	335	7
FY 91	593	480	339	1
FY 92	606	394	485	97
FY 93	395	354	465	173
FY 94	372	385	376	110
FY 95	499	435	377	49
FY 96 ¹	194	231	278	33

¹ Data through 2nd quarter of FY 1996.² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of approvals issued during each fiscal year.³ Number of PMA Supplements under review for more than 180 days in the current cycle.

Table 4. Performance Level for Original IDEs: FY 90 - FY 96

Fiscal Year (FY)	Number of Applications Received	Number of Approvals ²	Number under Review at End of Period	Number Overdue ³
FY 90	252	95	20	0
FY 91	213	72	12	1
FY 92	229	68	21	0
FY 93	241	60	14	3
FY 94	171	47	11	0
FY 95	214	109	15	0
FY 96 ¹	125	73	20	0

¹ Data through 2nd quarter FY 1996.² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of approvals issued during each fiscal year.³ Number of IDEs under review for more than 30 days in the current cycle.

Table 5. Performance Level for IDE Amendments: FY 90 - FY 96

Fiscal Year (FY)	Number of Applications Received	Number of Approvals ²	Number under Review at End of Period	Number Overdue ³
FY 90	288	123	29	0
FY 91	283	133	25	0
FY 92	297	127	21	1
FY 93	320	93	16	2
FY 94	254	109	11	0
FY 95	210	106	8	0
FY 96 ¹	103	38	19	0

¹ Data through 2nd quarter FY 1996.

² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of approvals issued during each fiscal year.

³ Number of IDE Amendments under review for more than 30 days in the current cycle.

Table 6. Performance Level for IDE Supplements: FY 90 - FY 96

Fiscal Year (FY)	Number of Applications Received	Number of Decisions ²	Number under Review at End of Period	Number Overdue ³
FY 90	3,043	2,968	245	0
FY 91	3,647	3,705	189	0
FY 92	3,644	3,469	359	4
FY 93	3,668	3,814	213	8
FY 94	3,020	3,070	160	1
FY 95	3,171	3,181	149	0
FY 96 ¹	1,463	1,457	154	0

¹ Data through 2nd quarter FY 1996.

² This number is not a subset of the "Number of Applications Received" in corresponding fiscal years; it represents the number of approvals issued during each fiscal year.

³ Number of IDE Supplements under review for more than 30 days in the current cycle.

Question. If it's true that by approving new drugs and medical devices the FDA helps improve or save lives, is it not conversely true that delays in approval means the FDA helps contribute to the degradation of life or even death? If so, what has the agency done within the past six months to improve the timely approval of all products currently before its review?

Answer. It is true that approving new drugs and devices can help improve or save lives when the new products are safe and effective. However, if the drug or device does not offer an improvement over existing therapy, but is simply another of a kind of product currently marketed, then patients already have a similar treatment available. The Agency believes that drugs and devices that are safe and effective and offer new benefits or reduced risks should be made available expeditiously and that unnecessary delays in the approval process for such products are detrimental. We are committed to appropriate expedited review and accelerated approval processes for products to treat serious and life-threatening diseases. When FDA does not approve unsafe products, lives are protected or saved. Not all of the products presented for approval are safe and effective. The FDA has instituted several initiatives in the last six months that will help improve the timely approval of those products currently before its review that are safe and effective.

Now that FDA has significantly reduced approval times, we are examining other aspects of the drug development process for those that could be streamlined without sacrificing safety and efficacy standards. Investigational New Drug (IND) Application Reform is being undertaken. A "Guidance for Industry on Content and Format of IND Applications for Phase I Studies of Drugs," was released November 20, 1995. The document covers both human drugs and certain biologics, and harmonizes Phase I IND requirements for drug products and well-characterized therapeutic biotechnology-derived products.

A second initiative deals with Manufacturing Changes Reform, and is referred to as Scale-Up and Post-Approval Changes (SUPAC). This initiative will significantly reduce the number of changes requiring submission and pre-approval of a supplementary new drug application (NDA), thereby saving time and money for industry and for FDA. SUPAC "Guidance for Immediate Release Solid Oral Dosage Forms," was published in the Federal Register on November 30, 1995. Additional guidance is in preparation for controlled release, liquids and semi-solid and other dosage forms, and will be completed later this year.

"Guidance for Industry for the Submission of an Environmental Assessment in Human Drug Applications," was published January 11, 1996. Regulations are also being changed, which will apply to all FDA. A Notice of Proposed Rulemaking (NPR) was published April 3, 1996. The comment period closes July 2, 1996. This NPR will reduce unnecessary National Environmental Protection Act (NEPA) evaluations by providing categorical exclusions for additional classes of actions that do not individually or cumulatively have a significant effect on the human environment and for which neither an Environmental Impact Statement nor an Environmental Assessment is required. This will also make FDA-wide NEPA procedures more concise and understandable.

We have made significant improvements in our medical device review performance during FY 1995, and are continuing to reduce review times and backlogs during FY 1996. We have instituted several management initiatives that will help minimize the industry workload and make better use of its available review resources. First, we exempted 122 device categories from the 510(k) premarket clearance requirement in January 1996, allowing those affected products to reach the market sooner and reduce the workload of both industry and FDA. This action brings the total device categories exempt from premarket notification to 572, or nearly three-fourths of all Class I device categories. A

second initiative is a pilot program to test third-party review of low and moderate-risk medical devices by outside organizations. We want to determine whether such a system can speed device review while reducing review costs and maintaining the independence of the review process. A Federal Register notice issuing a call for third party reviewers was published in April 1996. FDA subsequently held a teleconference with interested parties to explain the review program and answer questions. On July 22nd and 23rd, we will hold a 2-3 day training session for qualified third parties to explain the review process in detail, including "hands on" training with mock 510(k)s. Thirdly, we are developing a project management initiative for PMAs in two device review divisions which will enable us to prospectively plan, organize, and manage work to better use review resources and increase timeliness. This new system will provide more predictable PMA review times, enabling manufacturers to make better timed marketing decisions and more orderly marketing preparations. Fourth, we have started a "real-time" review pilot for some types of PMA supplements where the supplements will be reviewed by FDA during a meeting or teleconference with the industry. We expect to review the supplement in five working days or less. Expected benefits include rapid reviews for manufacturers and efficient use of FDA staff time. Lastly, we have initiated a one-year pilot project to test a new way to handle certain PMA supplements to improve both the speed and efficiency of the review process. The pilot is limited to changes in sites where the products are manufactured and/or sterilized. Basic elements include approval without inspection if the alternate site has maintained a good compliance status, on-site inspection and review of process control and qualification/validation data if the proposed site has not been inspected by FDA within the past two years, and consultations upon request and/or on-site review of the new or alternate facility prior to submitting the PMA supplement.

In addition to these initiatives, FDA is continuing to set priorities to manage the device program to improve its performance. FDA recently redirected FTEs from 510(k) review to PMA review to improve PMA performance and reduce the PMA backlog. With this shift in resources, FDA expects to complete more of the first cycle PMA reviews within 180 days in FY 1996 than in FY 1995. FDA will continue with its improvements to aid investigational device exemption (IDE) development and review. The IDE initiatives that were begun in FY 1995 are already helping to stimulate innovation and ease the review of PMAs resulting from the IDE submissions. FDA will also continue to designate high priority PMAs for "expedited" review to ensure that life-saving and innovative advances in medical technology reach the American public as soon as possible.

We are working hard to improve our performance. We recently granted the first approval worldwide for a new use of an implantable defibrillator in record time under our expedited review program. This device has the potential to save thousands of lives annually. Because of the public health benefit associated with this technology, FDA accelerated review of the PMA supplement and issued an approval decision only six days after receiving the application. In addition, through May of this year we have approved 27 PMAs -- the same as for all of FY 1995.

Question. In 1992, the Public Health Service reported that about half of the 2,500 neural tubal birth defects that occur in the U.S. each year are preventable

with sufficient folic acid consumption among women of child bearing age. In comments on your nutrition labeling health claims regulations, the Federal Trade Commission made an impressive case that food label health claims are a highly effective way to improve diets. Though folic acid/neural tube defects have been permitted in dietary supplement labeling for two years, you permitted those claims on foods for the first time this month. This was not a difficult or novel scientific issue, though it has been extremely important as a matter of public health. Please explain why these horrible delays occurred. What is your estimate of the effect of public health of the last two years of the delay in FDA approval?

Answer. The January 1994 regulations which authorized health claims for folic acid/neural tube defects on dietary supplements also stated that FDA would not object if manufacturers of conventional foods that were naturally good sources of folate or foods that had a history of folate fortification, used the health claim. Indeed, several foods such as orange juice and breakfast cereals have used the health claim based on that policy statement. Other groups, such as the March of Dimes, the Spina Bifida Association, and the Health Resources Services Administration, conducted educational campaigns outside the food label during this time period.

Having issued a statement of views on the use of a folate/neural tube defect health claim on conventional foods, issuing a final rule became of secondary importance to resolving a more difficult issue involving this nutrient -- how to fortify the food supply. This issue required a balancing act between effectively meeting the folate needs of women of child-bearing age in order to reduce the risk of neural tube defects against not increasing the risk of high folate intakes to another, much larger segment of the population who would be adversely affected, such as cancer patients, epileptics and arthritics, people with marginal vitamin B-12 status, or those HIV/AIDS patients with malabsorption syndromes. Safe implementation of the health claim and simultaneous mandated fortification of the U.S. food supply to increase its folate content were extremely contentious and required three meetings of the FDA Advisory Subcommittee on Folic Acid. At those meetings, agencies such as the National Institutes of Health, Health Resources and Services Administration, and the Center for Disease Control presented perspectives ranging from opposition to increasing the folate level of the food supply to recommending extremely high levels of folate fortification. The breadth of perspectives also reflects the range of opinions among members of the Advisory Subcommittee and the scientific community at large. The major reason for the contentiousness of the issue is the virtual absence of data from which to make informed decisions about folate safety. FDA's final regulations in March of 1996 resolved the fortification issue, formally authorized a health claim and set criteria for fortification.

The effect on public health cannot be calculated. It is not possible to estimate how many neural tube babies were born because of the absence of a health claim -- since it is not clear what impact health claims will have on motivating the food selection of women of child-bearing age. It is also not possible to estimate how many serious illnesses and injuries might have occurred if uncontrolled, and possibly very high, levels of folate were unknowingly consumed by those persons who might be harmed by these intakes.

A rational fortification system was the public health method of choice of the FDA Advisory Subcommittee because its members felt that increasing the folate

content of the U.S. food supply within a safe range would be more effective than health claims on food labels. This was a complex issue, but FDA was successful in resolving both the health claim and fortification issues. During the period of resolving these issues, not only were health claims authorized for use on dietary supplements, their use on appropriate foods was also publicly encouraged by FDA. Other educational campaigns were also implemented.

Question. The FDA recently proposed regulating tobacco sales in an effort to discourage smoking among youth. Has the FDA determined the resources necessary to pursue such a mission? Where will the agency get those resources?

Answer. In terms of our past efforts, for FY 1994, we used about 19 FTEs and \$1.3 million. In FY 1995, we expended about 27 FTEs and \$3.5 million. For FY 1996, we anticipate an increase, in dollars, of about 10 percent, and about the same level of FTEs as compared with FY 1995. These resources have come largely from the Program Management activity under the Office of the Commissioner, including the Immediate Office of the Commissioner and Office of the Chief Counsel, the Office of Management and Systems, the Office of Policy, the Office of External Affairs, and the Office of Operations, including the Immediate Office of the Deputy Commissioner.

We did not make a specific FY 1997 budget request for the regulation of nicotine-containing tobacco products. Because of the difficulty in knowing the final outcome, we have not yet determined what our resource requirements will be for FY 1997. We have generated a rough estimate of the cost of implementing and enforcing the proposed rule. In an effort to be as responsive as possible, but recognizing the uncertainty in working from a proposed rather than a final rule, we estimate that between 30 and 50 FTEs would be needed to implement the rule as proposed, which is about 0.5 percent of our workforce.

Question. And if a reallocation of resources within the FDA will be necessary, what other missions or programs will be affected? How will they be affected?

Answer. At this point, we do not anticipate any adverse effects on the other missions or programs of the Agency.

Question. While the goal of discouraging smoking by children is noble, what makes the FDA believe it can be successful in such an endeavor when it so far has been unable to fulfill its other missions as Congress requires?

Answer. The Agency believes that it is fulfilling the missions required of it by Congress. As we have reported annually to Congress, the Agency has met or surpassed to date all of the goals set in association with the Prescription Drug User Fee Act of 1992 (PDUFA). PDUFA performance goals require the prompt review of new drugs applications (NDAs), resubmitted NDAs, efficacy and manufacturing supplements, as well as the elimination of the overdue backlogs of these types of submissions. The FY 1994 goal was to review 55 percent of the PDUFA submissions on time; the Agency reviewed 96 percent of the NDAs on

time, and exceeded numerous other PDUFA goals. Further, as the General Accounting Office reported to Congress, FDA's implementation of the Mammography Quality Standards Act of 1992 has also been a success and has improved the quality of mammography services for American women.

The Agency has examined many options for reducing tobacco use by children and adolescents, and in reviewing the evidence has found that an effective program must address two areas: 1) Restrictions on cigarette and smokeless tobacco sales that will make these products less accessible to young people; and 2) restrictions on labeling and advertising to help reduce the appeal of tobacco products to young people along with requirements for a manufacturer-funded national education campaign aimed at those under 18 years of age to help reduce the products appeal to these young people. Evidence exists that mass media anti-smoking campaigns conducted nationally between 1967 and 1970, and more recently, in Vermont and California, have had a sustained effect on preventing teens from starting to smoke and on significantly reducing per capita cigarette consumption.

Question. I wrote you recently regarding the proposed rule to allow health claims on oatmeal and oat bran products. I received a response from your office that said my letter would be included in the docket, but it did not address my comments. In particular, I urged you to take the rule one step further and include a broader array of oat products, like those made with whole oat flour. If the intent is to get consumers eating more oats, thereby reducing their LDL-cholesterol, would this broader definition not make sense and be beneficial to the public's health?

Answer. FDA received a large number of comments on the proposed rule to allow health claims on oatmeal and oat bran products. Many comments urged FDA to include a broader array of oat products, like those made with oat flour, in the final rule. However, several other comments spoke against including products such as oat flour in the final rule, arguing that the processing of the flour altered the cholesterol-lowering properties of the oat products, when compared to similar products made from oatmeal or oat bran. FDA is in the process of evaluating all the comments, based on their scientific merits.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

REGULATORY REFORM

Question. Dr. Kessler, you mention in your statements of six regulatory proposals tied to the Vice-President's National Performance Review that will change the way you regulate drugs, medical devices, and medications made using biotechnology. Proponents of pending FDA reform legislation cite your proposed regulatory reforms, and other steps to speed up approval times of drugs and devices as simply a rehash of proposals that FDA and past administrations have suggested over the past several years. How do you respond to those charges?

Answer. The reform proposals of FDA are designed to build on the successes and performance improvements that FDA has already accomplished including efforts by the Agency to "reinvent" itself under the Vice President's Reinventing Government Initiative. As these reform initiatives go forward, we must make sure that these efforts in the end are going to help patients and help the public. We have mentioned six regulatory proposals in the area of biotechnology regulation. Now that FDA has significantly reduced approval times, we are examining other aspects of the drug development process for streamlining possibilities without sacrificing safety and efficacy standards. In this regard, there are several other major REGO initiatives well underway. First, Investigational New Drug (IND) Application Reform is being undertaken. We released the publication, "Guidance for Industry on Content and Format of IND Applications for Phase I Studies of Drugs," on November 20, 1995. The document applies to both human drugs and certain biologics products. It clarifies and harmonizes Phase I IND requirements for drug products and well-characterized therapeutic biotechnology-derived products.

A second initiative deals with Manufacturing Changes Reform, and is referred to as Scale-Up and Post-Approval Changes (SUPAC). This initiative will significantly reduce the number of changes requiring submission and pre-approval of a supplementary new drug application (NDA), thereby saving time and money for industry and for FDA. SUPAC "Guidance for Immediate Release Solid Oral Dosage Forms," was published in the Federal Register on November 30, 1995. Additional guidance is in preparation for controlled release, liquids and semi-solid and other dosage forms, and will be completed later this year.

"Guidance for Industry for the Submission of an Environmental Assessment in Human Drug Applications," was published January 11, 1996. Regulations are also being changed, which will apply to all FDA. A Notice of Proposed Rulemaking (NPR) was published April 3, 1996. The comment period closes July 2, 1996. This NPR will reduce unnecessary National Environmental Protection Act (NEPA) evaluations by providing categorical exclusions for additional classes of actions that do not individually or cumulatively have a significant effect on the human environment and for which neither an Environmental Impact Statement nor an Environmental Assessment is required. This will also make FDA-wide NEPA procedures more concise and understandable.

Review time has been cut for medical devices in recent years and continues to decrease. To help reduce unnecessary industry workload and better use our resources, FDA is undertaking additional management initiatives to reinvent its medical device review program. The first is exemption of many devices from the 510(k) premarket clearance requirement, which allows the affected products to reach the market sooner and reduces industry and FDA workload. A second is the designation of high priority "expedited" PMAs. Another is a project management initiative for PMAs in two device review divisions which will enable FDA to prospectively plan, organize, and manage work to better use review resources and increase timeliness. Another involves new strategies to aid in Investigational Device Evaluation development and review. Finally, we are undertaking a pilot program to test third-party review of low and moderate-risk medical devices by outside organizations and to determine whether such a system can speed device review while reducing review costs and maintaining the independence of the review process. We believe that implementation of these and

other recent initiatives will have genuine streamlining effects and represent real progress, not simply rehashing of old ideas.

Question. If any of your current proposal have been offered previously, why were they not implemented?

Answer. Some of these proposals may have been mentioned previously. However, it often takes significant time and effort not only to implement such substantial changes, but also to see any measurable improvement. We strongly believe that these proposals will help improve our processes, thereby benefitting both the American public and industry.

PRESCRIPTION DRUG LABELING

Question. You indicate the failure to require uniform labeling of information for prescription drugs results in widespread medication misuse and adds to the nation's health care bill by an estimated \$20 billion annually. On what do you base those estimates?

Answer. The Task Force for Compliance, a group of 22 major pharmaceutical companies, estimated in a 1993 report that the annual economic costs of noncompliance with medication regimens exceed \$100 billion. Over \$50 billion of that estimate was attributable to lost productivity. The remainder included costs of added hospital admissions of \$25 billion, prescriptions of \$8 billion, and nursing home admissions of \$5 billion. In deriving its own estimate, FDA relied on empirical studies and meta-analyses of the direct medical costs of preventable drug-related illness only. This included 35 million hospital admissions due to noncompliance, as well as 60 million unnecessary prescriptions, 60 million physician visits, and 35 million hospital admissions for preventable adverse reactions. FDA did not include indirect costs, such as lost productivity, in its estimate.

Question. How will implementation of your proposal allow doctors and pharmacists to continue their "patient by patient" crafting of medical solutions to medical problem? Won't standardization severely hamstring medical professionals in their efforts to meet the needs of individual patients through a "one size fits all" type of regulation?

Answer. The proposal does not impose a "one size fits all" regulation. FDA believes that the dissemination of basic medication information prepared specifically for patients will serve the purposes of supplementing and reinforcing oral instructions from health care professionals and will not take the place of such patient-professional interaction. Nor will medication leaflets interfere with or "hamstring" health care providers using additional patient management strategies or programs. FDA's proposed regulations specified general standards in understandable language and not the specific content or wording of these leaflets. The dispensing of medication information leaflets with new prescriptions is meant to provide the minimum level of information that FDA believes all patients should

receive with their prescriptions. FDA encourages professionals to personalize and expand on this information. Further, if the prescriber or dispenser believes that the information included in a leaflet would not be constructive for a particular patient, the leaflet may be withheld. The patient will receive the leaflet only if specifically requested by the patient.

Question. Wouldn't it be more helpful to work in consultation with medical professionals and provide assistance to ensure that information made available to patients is properly communicated in a clear and concise manner?

Answer. The proposal specifies that the program would be implemented by the Agency in close cooperation with health care professionals and consumer organizations. In recent years, the widespread use of computers by pharmacists and a law requiring oral counseling for Medicaid patients have increased the amount of drug information provided to consumers. According to a new FDA survey, the proportion of patients who received substantial written information about their prescription drugs rose from 25 percent in 1992 to 55 percent at the end of 1994, although the quality of that information appears to vary greatly. At the same time, we know that health care practitioners are becoming more, not less, pressed for time with individual patients. For example, during a recent advisory committee discussion concerning the need for patient education on the use of a particular drug, several advisory committee members commented that their actual time for patient counseling was becoming more constrained.

Question. Is it not likely that a listing of all possible side effects and other extraneous information will lead to further confusion by the patient and result a in reluctance on the part of some patients to take the medication at all?

Answer. Knowledge of side effects and possible drug interactions is not extraneous information. It is critical information. Patients must get a realistic sense of the likely benefits and risks of their medication from their health care practitioners and printed information accompanying the medication. A realistic sense of likely benefits and risks cannot exaggerate risks, nor can it ignore them. In addition, FDA's proposal does not require that all possible side effects be included in medication leaflets. In fact, the proposal clearly states that long lists of common and infrequent side effects not be included because they could serve to dilute important information. Finally, in its proposal, FDA cited numerous studies showing that written information does not increase reports of adverse events. While there were two studies that did not support this overall finding, they were severely flawed. FDA is not aware of any data demonstrating that the provision of patient information reduces compliance or increases anxiety about taking medications. In fact, the current growth in popularity of voluntary programs, all of which provide at least some information about side effects, would support the studies showing that patients want to receive such information.

THIRD PARTY APPROVALS

Question. There has been a lot of discussion about the use of third party contractors to review, and ultimately approve, drugs and devices as a way to make them available to the public in a timely fashion. How can the use of third party contractors, essentially allowing the private sector to regulate the private sector, not result in conflicts of interest within the drug and device industries?

Answer. The Agency is not currently convinced that there is a way to allow outside contractors to do product approvals without creating conflict of interest problems. Obviously, a situation where a product's review is being paid for by the company that manufactures the product raises a question about the integrity of the review. That is why FDA is initiating a pilot program for selected devices that is intended to answer that question. This device pilot program will determine the feasibility of using third party reviews to improve the efficiency of the Agency's review of premarket notifications, or 510(k)s. The program will involve about 250 device categories that have a low or moderate risk profile, clear standards for market clearance, and no requirement for clinical data as part of their application. We will accredit reviewers who can demonstrate their capability to carry out these reviews, and they will do so under clear guidelines written by FDA. The accredited organizations will be expected to demonstrate independence from the device manufacturers whose product is being reviewed, and will be expected to adhere to conflict of interest standards. We expect to begin certifying review groups soon and have established a two-year period for initial operation of this pilot program. We will examine the results of this pilot and make a determination as to whether this practice could be expanded to other areas.

Question. Is there any way to ensure the independence and objectivity of these contractors?

Answer. The Agency is willing to consider whether outside reviewers could maintain independence and objectivity through this device pilot program which is scheduled to run for two years. One concern about conflict-of-interest results from companies building continuing relationships with the companies that they review, which would not happen in a two year pilot program due to the limited time of the program. Some precautions will be taken in the device pilot: FDA has designated certain devices that are eligible for third party review; FDA will have recognized the third parties before they participate--ensuring that they possess high levels of scientific competence and strong controls over potential conflicts-of-interest and providing written guidance and face-to-face training in this area; and FDA will audit the third party reviewers, including inspections of any materials relating to the product reviews. After reviewing the results of this program, FDA will have a much better idea about expanding third party review while maintaining the integrity of the process.

Question. How will these contractors be reimbursed? What are the budget implications?

Answer. Under the pilot program, third-party reviews will be privately funded, meaning that manufacturers that elect to participate in the pilot will contact recognized third parties directly and will contract for their review services. Although the pilot program will involve an estimated three to five full time equivalents of effort per year in startup and maintenance costs for FDA, these costs will be offset if FDA is able to rely on third-party reviews in place of FDA's primary scientific review for the designated devices. Thus, if the piloted approach proves successful, it will involve virtually no net costs to the government. It will also enable FDA to target its scientific review resources to higher-risk devices while maintaining confidence in the review by third parties of low and moderate risk devices.

DELAYS IN DRUG DEVELOPMENT

Question. You note in your statement the increasingly frequent claims that the overall time to develop a drug has grown longer and, that if true, it would be a disturbing trend. What does the evidence show about trends in the length of time for drug development?

Answer. FDA has not conducted its own study of overall drug development time, but according to a recent study by the Centre for Medicines Research, a non-profit industry-funded organization in the U.K., there has been no significant change in drug development time since 1980. The study included development times for 700 drugs in 20 nations, including the United States, and showed that from 1980 to 1994, the mean total development time varied between 10 and 12 years, with human trials averaging about 6 of those 12. In 1994, it was 11.5 years.

Question. If the lengths of time have been on the rise, to what do you attribute that trend?

Answer. The evidence we have at this time suggests that total drug development time has not generally risen in the last 16 years.

SEAFOOD INSPECTION

Question. You highlight steps you have taken to improve the safety of seafood by issuing the final rule instituting HACCP (the Hazard Analysis and Critical control Points) systems. USDA is currently in the process of implementing HACCP procedures for the meat and poultry industries. Did you work with USDA, and FSIS specifically, in developing your HACCP rules?

Answer. FDA worked with the Food Safety Inspection Service (FSIS) in the development of HACCP through a number of avenues. Both USDA and FDA participate in the National Advisory Committee on Microbiological Criteria for Foods. This advisory committee developed the benchmark blueprint for HACCP, which has served as the skeleton for both the FDA and USDA's HACCP regulations. FDA also worked with FSIS informally in the development of both

regulations, through discussions on key points in the regulations and through the review and comment processes.

Question. Are your HACCP rules consistent with what is being developed at USDA to ensure that our safety standards for seafood are the same as those for meat and poultry?

Answer. Both agency's rules conform to the seven principles of HACCP as outlined by the National Advisory Committee on Microbiological Criteria for Foods. Beyond that, the regulations conform in many key aspects, such as provisions for handling sanitation either inside or outside the plant, the need for sanitation monitoring, and various records provisions. However, because of differences between commodities and the existing regulatory structures of the two agencies, certain differences do exist between the regulations. For example, microbiological testing is required under the USDA rule and not under the FDA rule. This is primarily a response to the concern for certain enteric pathogens in meat and poultry that exist at much reduced levels for fish. The level of concern is the result of microbiological differences between cold-blooded fish from an aquatic environment and warm-blooded land-based animals. Controls for imported products are also different, reflecting the differences in the regulatory structures of the two agencies relative to import control.

COMMODITY FUTURES TRADING COMMISSION

STATEMENT OF JOHN E. TULL, JR., ACTING CHAIRMAN

ACCOMPANIED BY:

ANDREA CORCORAN, DIRECTOR, DIVISION OF TRADING AND MARKETS

MADGE BOLINGER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT

INTRODUCTION OF WITNESS

Senator COCHRAN. The subcommittee will please come to order.

We are now very pleased to have the opportunity of reviewing the budget request of the Commodity Futures Trading Commission. We appreciate very much the presence at our hearing of John Tull, Jr., who is Acting Chairman of the Commission. There are others who have accompanied you, Mr. Tull. We would request that you introduce them for the record, and then proceed with whatever comments or statements about the budget request that you think are appropriate to be made to the subcommittee.

STATEMENT OF JOHN E. TULL, JR.

Mr. TULL. Thank you, sir, and good morning, Mr. Chairman and members of the subcommittee. Thank you for inviting me to present the President's fiscal 1997 budget request for the Commodity Futures Trading Commission. With me this morning are, on my left, Madge Bolinger, our Director of the Office of Financial Management, and on my right Andrea Corcoran, our Director of the Division of Trading and Markets.

Mr. Chairman, if I may, I would like to have my written testimony included in the record, and I will briefly summarize it.

As you know, the President's request for the CFTC is \$56,601,000. This request represents a very modest increase of \$3 million, or 5.6 percent, over the fiscal 1996 budget. Since the Commission has last appeared before your subcommittee, we have made progress in six important areas.

First, with additional funds provided last year, the Commission is making critical improvements to its market surveillance computer system. In particular, we are planning to add daily options data to our large trader reporting system. Currently, we have daily large trader reports for futures, but only weekly reports for options. As options volume has grown over the years, our surveillance picture has become less complete. We must have a modern system that captures the whole picture for today's dynamic and sometimes volatile markets.

Market volatility over the last few months underscores the need to improve our surveillance system. When markets become extremely volatile, we need to know immediately the financial exposure of large traders in both futures and options markets, and the

potential impact that they may have on other market participants. Our new surveillance system will allow us to do this.

Second, we have taken a number of steps to strengthen our enforcement program. Our goal is to send a clear message that fraud and other violations of the Commodity Exchange Act will be promptly and thoroughly investigated and vigorously prosecuted. During fiscal 1995, the Commission brought a number of significant enforcement cases and imposed over 11 million dollars' worth of civil penalties. We are concentrating our enforcement resources on matters that will have the greatest deterrent impact against wrongdoing in the marketplace.

Third, we have devoted considerable time last year to dealing with the collapse of the Barings Bank. The CFTC was particularly concerned about the potential impact of the Barings collapse on U.S. markets and U.S. firms, and we worked to protect their interests. In the wake of the Barings crisis, the CFTC and British regulators hosted a meeting to address international regulatory issues. At the conclusion of the meeting, the regulators from 16 countries issued a statement known as the Windsor Declaration outlining recommendations that include cooperation among market authorities; protection of customer positions, funds, and assets; default protections; and regulatory cooperation in emergencies.

The CFTC has taken many steps domestically and internationally to implement these recommendations. Most notably, the Commission, along with 13 foreign regulators signed a Declaration of Cooperation and Supervision of International Futures Exchanges this last March. Fifty-two futures exchanges and clearing organizations also signed a companion memorandum of understanding. This declaration and MOU represent an unprecedented commitment to information sharing and cooperation among world futures exchanges, clearing organizations, and regulatory authorities that will significantly enhance the international safety net for financial markets.

Fourth, the Commission has worked to ensure compliance with the enhanced audit trail standards that became effective in October 1995 for the higher volume exchanges. The exchanges have made significant improvements that will benefit customers.

Fifth, the Commission has demonstrated concern for competitive issues in its regulatory program. For example, in response to petitions from futures exchanges, the Commission has established a pilot program that will allow exchanges to create markets for sophisticated traders that will be exempt from many of the requirements of the Commodity Exchange Act. These less regulated markets will allow U.S. exchanges to compete more effectively with the over-the-counter derivatives markets and foreign exchange-traded instruments without sacrificing customer protection.

Finally, the Commission has promoted an ongoing dialog with industry by holding public roundtables to discuss regulatory reform initiatives. Recent roundtables have addressed a disclosure framework for managed funds, risk-based net capital rules, and agricultural trade options. We are planning a roundtable in the near future on internal controls.

These roundtable discussions have been followed by concrete action. After the roundtable on managed fund disclosure require-

ments, the Commission issued final rules completely revamping the disclosure framework. Following the roundtable on net capital rules, the CFTC amended its rules to harmonize them with the SEC and industry self-regulatory organization requirements, and is collecting the information needed to consider further changes.

In closing, the Commission recognizes that this subcommittee faces difficult appropriations decisions this year. Nonetheless, we believe that the modest increase that we have requested for fiscal 1997 is essential for us to continue enhancing our enforcement and surveillance programs. Additional funding in fiscal 1997 would enable the Commission to heighten its surveillance in major market centers and ensure that the upgrade of its surveillance system stays on schedule. Additional funding also will enable the Commission's enforcement program to respond more quickly to fraud and other wrongdoing in the marketplace, provide a greater level of customer protection, and better promote market integrity. For these reasons, we believe that the President's request is fully justified.

I would be happy at this time to answer any questions that you might have.

PREPARED STATEMENT

Senator COCHRAN. Thank you, Mr. Tull. We have your complete statement, and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF JOHN E. TULL, JR.

Mr. Chairman and Members of the Subcommittee: Thank you for inviting me to present the President's fiscal 1997 budget request for the Commodity Futures Trading Commission.

CFTC'S BUDGET REQUEST

As you know, the President's fiscal 1997 budget request for the CFTC is \$56,601,000 and a staff ceiling of 600. This request represents an increase of \$3 million, or 5.6 percent, over the fiscal 1996 level.

First, on behalf of the Commission, I would like to express our appreciation for the increased funding that Congress provided in fiscal 1996. This increase will enable the Commission to meet its statutory responsibilities, ensure an appropriate level of enforcement and oversight, and keep pace with important market developments. In particular, we have targeted the additional \$4.6 million you appropriated in fiscal 1996 for strengthening our enforcement and market surveillance programs.

The Commission recognizes that this Subcommittee and the Congress face especially difficult appropriations decisions this year. Nonetheless, we believe that the modest increase we have requested for fiscal 1997 is essential to enable the Commission to continue to strengthen its enforcement and market surveillance programs as well as carry out its other responsibilities fully and effectively.

Overview of Funding Levels and Operational Effects

In order to put our fiscal 1997 budget request in perspective, I would like to review briefly the CFTC's activities and its appropriations history over the past few years in the context of market developments. As you know, the Commodity Futures Trading Commission is responsible for ensuring the integrity of the futures and option markets, protecting customers from fraud and other trading abuses, and monitoring the markets to detect and prevent price distortions and manipulations. We oversee 261 futures commission merchants and some 65,000 commodity professionals.

These obligations have become more challenging in the face of dramatic market growth and innovation. Since 1992, the last time Congress significantly increased the agency's statutory responsibilities, the volume of U.S. futures and option trading has increased by over 40 percent, from 359 million contracts to 505 million contracts

in fiscal 1995. During that same time period, the number of actively traded contracts has grown by over 40 percent as well. Innovation in exchange-traded futures and options has paralleled the development of increasingly novel and complex over-the-counter derivative instruments. Furthermore, futures and option markets around the world have become more closely linked.

In addition to these significant market developments, an expanded Congressional mandate has significantly increased the CFTC's duties. In 1992, Congress recognized the need to modernize the regulatory framework for futures and option markets and enacted the Futures Trading Practices Act, which reauthorized the Commission and gave it important new tools and responsibilities for regulating today's markets. The 1992 Act created new, ongoing responsibilities for the CFTC in many areas, including audit trail enhancements, exemptive authority for a variety of over-the-counter derivative instruments, registration requirements for floor traders, ethics training for market professionals, and risk assessment for holding company systems. Last year, Congress reaffirmed these obligations by passing a one-line reauthorization for the Commission, which authorized appropriations through fiscal 2000.

Despite its increasing responsibilities, the CFTC's budget remained essentially flat from fiscal 1992 to fiscal 1995. Consequently, the Commission reduced personnel, substantially cut non-staffing expenses, and delegated additional duties to self-regulatory organizations. The CFTC also deferred computer upgrades and systems development for market surveillance and other activities. In short, the Commission and its staff were stretched to the limit and it became extremely difficult for us to provide the oversight and enforcement presence on which market users and the economy at large depend.

In fiscal 1996, the Commission, the President, and the Congress recognized that more resources were required, and the Congress increased the Commission's appropriation by about nine percent over fiscal 1995. This increase was absolutely necessary to enable the Commission to meet its statutory responsibilities and keep pace with market developments. In the current fiscal year, we will maintain our lean structure so that we can allocate virtually all of our \$4.6 million increase to two items at the top of our agenda—continued strengthening of our enforcement program and enhancement of our automated market surveillance system. Approximately half of the \$4.6 million increase will fund non-discretionary pay increases and new enforcement personnel; the other half will fund the surveillance system upgrade. These priorities, along with the Commission's other major accomplishments in the last year, are reviewed in detail below.

In fiscal 1997, the increase we have requested will be used to continue enhancing our enforcement and surveillance programs. Two-thirds of the dollar increase would go to the enforcement program; the balance would be largely directed to the surveillance program. Our fiscal 1997 request would put the CFTC at a staffing level of just one percent over fiscal 1992. This modest addition to our funding is well justified and will benefit agricultural producers and processors, financial services firms, energy concerns and many other sectors of the economy that depend on the price discovery and risk-shifting functions of futures and option markets.

ENFORCEMENT

Case Highlights

As I have noted, a strong, effective enforcement program is one of the Commission's top priorities. Our goal is to send a strong message that fraudulent activity and other violations of the Commodity Exchange Act will be promptly and thoroughly investigated and vigorously prosecuted. During fiscal 1995, the Commission brought a number of significant enforcement cases and imposed over \$11 million in civil penalties and other remedial sanctions. Cases brought since the Commission last appeared before the Subcommittee include:

Prudential: In June 1995, the Commission filed an administrative complaint against Prudential Securities and a former Prudential employee alleging that the individual violated the anti-fraud provisions of the Commodity Exchange Act in connection with his handling of futures and options accounts. Prudential was charged with failing to supervise its employee and, aided and abetted by the individual, with violating recordkeeping provisions of the Act and regulations. Prudential settled the allegations against it by agreeing to the entry of a cease and desist order, payment of a \$725,000 civil monetary penalty, and undertaking to review its policies and procedures.

Metallgesellschaft: In July 1995, the Commission filed and simultaneously settled an administrative action against MG Refining & Marketing, Inc. (MGR&M) and its affiliate, MG Futures, Inc. (MGFI), U.S. subsidiaries of the German conglomerate,

Metallgesellschaft. The Commission entered findings that MGFI failed to report material inadequacies in its internal controls and to file certified financial reports, and that MGR&M sold illegal off-exchange futures contracts, all in violation of the Commodity Exchange Act and regulations. In settling the charges, MGR&M and MGFI agreed jointly to pay a \$2.25 million civil monetary penalty. MGFI and MGR&M also agreed to certain remedial sanctions, including establishing a special oversight committee to conduct a review of MGFI's internal control systems and MGR&M's policies and procedures concerning the marketing, offer and sale of off-exchange contracts.

Refco: In December 1994 and January 1996, the Commission filed and simultaneously settled administrative actions against Refco, Inc. for violating segregation, capital, and reporting requirements, failing to supervise diligently its employees, and for violating prior CFTC cease and desist orders. In addition to agreeing to revise its internal procedures and reporting lines, Refco agreed to pay a total of more than \$2 million in civil monetary penalties.

Initiatives to Strengthen the Enforcement Program

In the last year, while working on these important cases and investigations, the Commission has made significant strides in strengthening and improving its enforcement program. The Commission has appointed a new Director and Deputy Director for the Division of Enforcement, and under this new leadership, has reorganized the Division into four investigation and litigation teams. The teams are designed to make maximum use of the Division's resources and intensify its investigative and prosecutorial efforts. The Commission also has hired new attorneys and is in the final process of hiring support staff for the Division with the additional funds made available in fiscal 1996. These structural changes and additional staff are important components of the Commission's program to enhance its enforcement presence.

The Division also is revitalizing its in-house training program for enforcement personnel. To that end, the Division conducted a two and one-half day training seminar in September 1995 for enforcement professional staff from all offices and will continue with additional training programs in fiscal 1996.

In conjunction with these personnel and structural changes, the Commission also is refocusing its enforcement priorities. In addition to seeking to increase the number of investigations and cases, the Commission is concentrating its enforcement resources on matters that will have the greatest deterrent impact against fraud and other wrongdoing in the marketplace. The Division is reexamining every aspect of its work, from case selection and internal procedures to strategies and theories of litigation. This reexamination is designed to ensure that the Division's work is as efficient, as effective and as fair as possible. Additional staff will be assigned to significant investigations in order to complete them more quickly or expand them where appropriate. New staff also will provide flexibility for responding to urgent matters—for example, when the Commission must act rapidly against an individual or firm to prevent the loss of customer funds—without disrupting other ongoing work. By focusing on a variety of measures of effectiveness, the Commission expects to enhance both the efficiency and the deterrent value of its enforcement program.

MARKET SURVEILLANCE

The Commission's other top priority for fiscal 1996 is to modernize its market surveillance computer system. Since its inception in 1974, the Commission has collected daily reports on the activities of large futures traders so that it can effectively monitor markets during periods of price volatility and enforce the anti-manipulation prohibition, speculative position limits, and other provisions of the Commodity Exchange Act. In 1984, the Commission initiated a process to more fully automate its surveillance system, including its large trader reports for futures. However, because the volume of options trading at that time was so low, the Commission required reports on the activities of large options traders only once a week, and that information only reflected traders' positions on one day.

For a number of reasons, the Commission has determined that its surveillance system must be upgraded and modernized. First, as I have noted, markets have grown rapidly. Since 1984, futures trading volume has increased from 149 million contracts to 409 million contracts. Even more dramatically, options trading volume has increased ten-fold, from 9 million contracts to 95 million contracts in fiscal 1995. Thus, as options volume has grown, our overall surveillance picture has become less complete; today, nearly 20 percent of total contract volume is not reflected in our daily reports. This incomplete picture is no longer acceptable.

Second, our current computer system has nearly reached its capacity for handling the growth in futures-related data alone and clearly lacks the capacity to handle

both futures and options data. Thus, the CFTC has been contemplating a new system simply to keep pace with futures data. Computer systems currently available can accommodate options data in a much more cost effective way, making fiscal 1996 a sensible year to begin the process for adding options data.

Finally, the failure of Barings PLC underscored the value of a comprehensive, up-to-date large trader reporting system. As I will discuss in more detail below, the Barings crisis was triggered by a trader who accumulated large losses in overseas futures and options markets. One of the CFTC's first actions in responding to the crisis was to check our large trader reporting system to see whether the firm or any affiliated entities held significant futures positions in U.S. markets. Fortunately, they did not. Nonetheless, in drawing lessons from the Barings experience, we determined that it is crucial to add daily large trader reports for options so that our surveillance picture will be more complete in the future and we will be better prepared to address a Barings-type situation in U.S. markets.

For these reasons, the Commission has underway an upgrade of its surveillance system that will involve redesigning software and programming major portions of the system to incorporate both futures and options data and analytical tools for comprehensive market surveillance. The CFTC has committed to the full cost of this project in its fiscal 1996 budget. By the end of the fiscal year, we expect to begin collecting preliminary data for the system. The new system will begin operating in fiscal 1998.

MARKET OVERSIGHT

In addition to its enforcement and market surveillance functions, the CFTC's mandate also requires it to oversee the activities of futures and options exchanges, the National Futures Association (an industry self-regulatory organization), and market professionals. These oversight activities are designed to protect customer funds, prevent trading and sales practice abuses, and ensure the financial integrity of regulated firms. Ongoing oversight activities include financial and sales practice audits; rule enforcement reviews; trade practice investigations; reviewing margin, clearance and settlement rules; and ensuring that firms carrying customer funds are adequately capitalized and have properly segregated customer funds from firm funds.

Audit Trail

The Commission and its staff have devoted considerable time to ensuring compliance with the enhanced audit trail standard that became effective in October 1995 for higher volume exchanges. The enhanced audit trail standard, which was mandated by the Futures Trading Practices Act of 1992, requires these exchanges to demonstrate that their trade records are unalterable, continuous, independently timed, and properly sequenced to the extent practicable, or to make a good faith effort toward meeting the standard. In late 1994 and early 1995, the Commission tested each exchange's audit trail system. At the request of the exchanges, the Commission thereafter provided recommendations for system improvements. Each exchange was informed that adoption of the recommendations would place the exchange within a "safe harbor" for good faith compliance with the enhanced standard. Two of the four exchanges tested adopted all of our recommendations and the Commission has determined that they currently are within the safe harbor for good faith compliance with the October 1995 standard. The other two exchanges adopted many, but not all, of the Commission's recommendations. Therefore, these exchanges currently are being retested to determine whether the improvements made will enable their audit trail systems to meet the October 1995 performance standard.

In addition, the Commission has been actively involved in reviewing the development of various automated trading and audit trail systems, including a Chicago Mercantile Exchange and Chicago Board of Trade joint project to develop AUDIT, an automated hand-held trading card system, and other projects to create electronic order routing systems. Recently, the Commission held a series of meetings in which various exchanges and the Futures Industry Association briefed the Commission on technological enhancements in place or under development in the industry.

Designation of New Contracts

The Commission also reviews proposed futures and option contracts to ensure that they are not susceptible to manipulation and meet all the requirements of the Commodity Exchange Act. In fiscal 1995, the Commission approved 38 new futures and option contracts, generally within 90 days. In fiscal 1996, the number of new contracts submitted to the Commission has skyrocketed. In the first six months of this fiscal year, the CFTC has approved 67 new futures and option contracts.

In fiscal 1995, the Commission has approved several innovative futures contracts that are designed to benefit many sectors of the economy. For example, the Commission approved area yield futures contracts, which provide a vehicle for crop insurance companies and other cash market participants to hedge financial risks related to yield fluctuations of major U.S. crops. The Commission also approved two electricity futures contracts, the first contracts ever designated for this commodity. These contracts are designed to meet the specialized hedging needs of firms in the electrical energy industry, including utilities that are becoming more actively involved in cash market transactions as a result of ongoing deregulation.

In the financial arena, the Commission approved futures contracts designed to meet the hedging needs of institutions exposed to risk arising from changes in the yield differentials among long-, medium-, and short-term debt obligations. In addition, the Commission approved contracts based on the debt and equities of emerging markets in Latin America. These contracts give international portfolio managers and other institutional investors a means of hedging portfolios holding sovereign debt of emerging nations. The Commission also approved cross-rate currency contracts designed to deal with the hedging needs of institutions having exposure to foreign currency exchange rate risks not involving the U.S. dollar.

Oversight of Margins on Stock Index Futures

In March 1993, the Federal Reserve Board (FRB) delegated to the Commission the authority to review margin levels for stock index futures and options. During fiscal 1995, Commission staff monitored and reviewed nearly 150 changes to margin levels for stock index futures and option contracts and prepared an annual report to the FRB on the Commission's exercise of this delegated authority. The Commission also continues to conduct briefings for other federal financial regulators and shares information with the SEC and bank regulators on a monthly basis.

INTERNATIONAL DEVELOPMENTS

The Commission's activities related to the international marketplace have continued to increase with the rapid growth of foreign futures and option markets and the globalization of financial services activities. Derivative products are now traded around the clock and around the globe, in more than twenty foreign jurisdictions, including at least six major markets and many emerging markets. At the same time, technological advances have increased the connections among markets and the rapidity with which market events can be transmitted from one market to another. U.S. markets are forging trading linkages with their foreign counterparts, futures commission merchants under our oversight are becoming increasingly multinational, and large customers have world-wide operations.

To assure adequate customer and market safeguards in this increasingly global environment, the Commission must keep abreast of developments around the world and create and implement a variety of coordination mechanisms with foreign regulators. These include information-sharing, joint enforcement activities, mutual recognition agreements and financial surveillance. The Barings crisis illustrated the importance of these international cooperative efforts.

Barings

The Commission played a major role in protecting the interests of U.S. customers and firms that were placed in jeopardy by the financial collapse of Barings PLC, a British merchant bank with world-wide affiliates and operations. The collapse, which came to a head in February and March 1995, was caused by a total failure of internal controls that allowed one of the firm's traders to accumulate huge losses in futures and options markets in Singapore and Japan. The CFTC was particularly concerned about the potential impact of the failure on U.S. markets and U.S. firms doing business with the Barings enterprise. Although Barings had minimal direct involvement in U.S. markets, a number of U.S. firms were active in the markets that came under stress due to Barings' losses. CFTC officials and staff were in frequent contact with U.S. and foreign regulators, exchanges and firms through "command centers" that operated around the clock. Among other things, we worked to ensure that margin funds provided by U.S. firms to foreign markets would not be used to cover Barings' losses and to devise systems to permit the transfer of U.S. customer or firm positions at foreign exchanges that had no rules for such transfers. The Barings failure demonstrated the importance of mechanisms to contain risk, provisions to ensure the viability of clearing arrangements during periods of extreme stress, and formal and informal lines of communication among regulators and exchanges around the world.

In the wake of the Barings crisis, the CFTC and the United Kingdom's Securities and Investments Board jointly hosted a meeting in Windsor, England in May 1995,

to address international regulatory issues. At the conclusion of the meeting, regulators from 16 countries issued a statement, known as the Windsor Declaration, outlining steps to be taken to strengthen the arrangements for supervising international futures markets. The recommendations set forth in the Declaration address: cooperation among market authorities; protection of customer positions, funds, and assets; default protections; and regulatory cooperation in emergencies. The Windsor Declaration begins a process that should diminish the adverse effects of a market crisis caused by the failure of a single participant and improve the ability of international financial markets to weather such a crisis.

The CFTC is taking steps domestically and internationally to implement the recommendations set forth in the Windsor Declaration. In furtherance of the recommendations, the CFTC organized an industry-wide "stress test" of the existing individual and cooperative systems for responding to a market disruption. The Commission also updated the CFTC Market Disruption Contingency Plan, which outlines procedures for the Commission to follow in the event of extreme market volatility, financial emergency, or physical disruption. Other CFTC-supported initiatives include developing generally accepted risk principles that will assist financial institutions in improving risk management procedures and internal controls, and creating a plan to provide further guidance and dialogue with financial services firms on risk management, account supervision, and operational and financial controls.

In March 1996, the CFTC took another important step in implementing the recommendations of the Windsor Declaration. The Commission, along with 13 foreign regulators, signed a Declaration of Cooperation and Supervision of International Futures Exchanges. Fifty-two futures exchanges and clearing organizations signed a companion Memorandum of Understanding. This Declaration and MOU represent an unprecedented commitment to information-sharing and cooperation among world futures exchanges, clearing organizations, and regulatory authorities that will significantly enhance the international safety net for financial markets.

Other International Activities

The Commission's efforts to strengthen its bilateral relationships with foreign regulators are also continuing full speed ahead. In fiscal 1995, the Commission signed memoranda of understanding for cooperation and information sharing in enforcement matters with Australian, Mexican, Italian, and Argentinean regulatory authorities. In addition, we continued to exchange information and cooperate in enforcement matters with foreign regulatory, law enforcement and self-regulatory authorities in many countries.

The CFTC also helps emerging markets establish a firm regulatory foundation. Such assistance includes training regulators, commenting on proposed futures-related legislation and regulations, and assisting with the development of computer trading and surveillance programs.

REGULATORY COORDINATION AND REFORM

Regulatory coordination and reform remain an important part of the CFTC's agenda. The CFTC is a member, along with the Treasury Department, the Securities and Exchange Commission, and the Federal Reserve Board, of the President's Working Group on Financial Markets. The Working Group meets regularly to coordinate regulatory policy. In the last year, the Working Group has addressed the consequences of Barings and the Windsor initiatives, bankruptcy law changes to assure appropriate treatment of over-the-counter products, and many other issues of common concern. In addition, we are working with other regulators and self-regulatory organizations on an ongoing basis to eliminate duplicative requirements and harmonize rules. For example, in fiscal 1996, the CFTC led a successful effort to eliminate duplicative audit activity by futures and securities regulators and self-regulators.

The traditional close cooperation that the Commission has enjoyed with the United States Department of Agriculture will no doubt continue as the Federal Agriculture Improvement and Reform Act of 1996 has directed USDA to consult with the CFTC in the development of programs to provide risk management education to agricultural producers.

The Commission also believes that promoting voluntary efforts to improve overall supervision of the marketplace and foster effective self-regulation can reduce regulatory costs and the need for legislative mandates. To that end, the Commission continues to work with the SEC and the Derivatives Policy Group, which represents the six largest over-the-counter derivative dealers, on a voluntary oversight initiative aimed at coordinating financial reporting and risk assessment activities.

Furthermore, the Commission has promoted an ongoing dialogue with industry by holding public roundtables to discuss regulatory reform initiatives. Recent

roundtables have addressed the disclosure framework for managed funds, risk-based net capital rules, and agricultural trade options. A roundtable on internal controls is planned for the near future.

These roundtable discussions have been more than just talk. They were followed by concrete action. After the roundtable on managed funds disclosure requirements, for example, the Commission issued final rules completely revamping the disclosure framework. We eliminated boilerplate and other information of limited value and reorganized important information into a shorter, clearer presentation that will be easier for industry participants to prepare and for investors to comprehend. Following the roundtable on net capital rules, the CFTC adopted amendments to harmonize its net capital rules with those of the SEC and industry self-regulatory organizations and is collecting the information needed to consider further changes.

The Commission also has demonstrated flexibility and concern for competitive issues in its regulatory program. For example, in response to petitions from the Chicago exchanges, the Commission has established a pilot program that will allow U.S. futures exchanges to create markets for sophisticated traders that will be exempt from many of the requirements of the Commodity Exchange Act. These less regulated markets will allow U.S. exchanges to compete more effectively with over-the-counter derivative markets and foreign exchange-traded instruments.

Finally, the Commission is actively working to address market participants' interest in using new technologies to increase their efficiency and competitiveness. These efforts include: consulting with industry representatives concerning current and prospective uses of the Internet for communicating with the public and with other futures professionals; creating a program for monitoring solicitation activity on the Internet; developing mechanisms for electronic filing of reports and other documents with the Commission; and developing other ways to facilitate innovative uses of computer technology in a manner consistent with customer protection.

The Commission is also expanding its own use of technology to enhance its communication with the public. The Commission has established a "home page" on the Internet and plans to expand this site to make additional information more widely available to the public.

CONCLUSION

The CFTC is committed to building on the achievements of the last several years to fulfill its congressional mandate and keep pace with a more complex, dynamic marketplace. To accomplish this goal and make essential improvements to our enforcement and surveillance programs, the Commission must have a modest increase in its fiscal 1997 appropriation. This increase will enable the Commission to heighten its surveillance in major market centers and ensure that its surveillance system upgrade stays on schedule. Additional funding also will enable the Commission's enforcement program to respond more quickly to fraud and other wrongdoing in the marketplace, provide a greater level of customer protection and better promote market integrity. Under these circumstances, the President's budget request is fully justified.

PENALTIES

Senator COCHRAN. Mr. Tull, you indicated in your statement that in the bringing of actions, you have been able to successfully impose penalties of about \$11 million, I think you said. My question is, have these been collected, and if so, what do you do with the money?

Mr. TULL. Sir, the majority of them have been collected, I believe \$9.4 million. That money is forwarded to the U.S. Treasury.

Senator COCHRAN. And then nobody knows what happens to it after that, probably. [Laughter.]

Mr. TULL. Hopefully, you all are going to give us back some.

Senator COCHRAN. Well, you know what is going to happen, probably, is about the same thing that happened this year to our budget allocation. From the budget allocation that we adopted, we were really given about the same amount of money to allocate among all these different interests as we had the year before. We expect that is probably going to happen again this year, and we will have pret-

ty much a funding freeze. What would be the impact on CFTC and its obligations under the law if we simply provided the same level of funding next year that you have this year?

Mr. TULL. Well, sir, I think that if our funds were flat we would remain flat in our efforts. As you know, we are in increasing, explosive markets with volatility and new contracts. Certainly in the last several months price volatility has been in the news. We feel that the increased surveillance and enforcement requirements that are placed upon us require this extra funding, and I might add that the extra funding is going primarily for increased FTE's, I believe 35 of them, in an effort to increase our impact on the marketplace.

ENFORCEMENT

Senator COCHRAN. One of the priorities for reorganizing and a high priority of Chairman Schapiro's before she left the Commission was to strengthen the Commission's enforcement efforts. That was a designated priority, and a number of changes were made. Specifically, what is the status of this now? Is that a continuing effort? Has the reorganization been completed? I know there were four investigation and litigation teams that were being provided with new leadership. How are those priorities being reordered?

Mr. TULL. Sir, first I must say that the remaining three commissioners are fully dedicated to carrying out Chairman Schapiro's enforcement emphasis. We presently are almost finished hiring the increased FTE's that last year's budget allowed us. We have hired in this fiscal year 10 attorneys in Washington, 6 in New York, and we are in the process of interviewing others. We have almost completed hiring the additional FTE's that you gave us last year under the budget, also I might add with the emphasis on surveillance which goes hand in hand along with enforcement, because without adequate surveillance we could not uncover some of the situations that require enforcement.

But I would say that we are far along in our reorganization plan. The four teams are now in place in headquarters. I might add that this is an innovation. Each team is able to do its own investigating, its own litigation. It is a team in itself that can be assigned a particular project.

STAFF LEVELS

Senator COCHRAN. Do you think the staff levels anticipated for this fiscal year will be reached? You mentioned that you are almost there. Do you think you will get it done?

Mr. TULL. Yes, sir; presently we are a little under our allotted FTE's of 565. I believe about 530 or 540 are on board now. But I must add, sir, we have two vacant commissioners' offices and their staffs, and certainly have lost staff through attrition. The \$3 million that we are asking for this year, \$2 million of that is going for 35 increased FTE's. Almost all of those are going, again, to enforcement and to surveillance. They are going primarily to our regional offices in New York and Chicago, which is where the markets are.

Senator COCHRAN. I understand the Commission plans to make the securing of restitution for wronged customers, victims, a main priority in resolving enforcement cases. Are you able to do this in cases that do not involve seizure of assets?

Mr. TULL. Sir, I think so. We have a reparation program that we are very proud of, particularly for the small customer, the small investor who has no other place to go. Very often, these hearings are held over the telephone, and judgment given and restitution returned to the customer. I believe also that in our budget this year one of those FTE's is an additional hearing judge.

CONTRACT DESIGNATION

Senator COCHRAN. One of the industry complaints I heard about recently is the time it takes to approve new futures contracts. How long is it taking, and is anything being done to speed up the process? Do you think this is a legitimate complaint?

Mr. TULL. Sir, we think we have helped the process a whole lot. We are down now, I believe. Our economic analysis department tells me that we have a 90-day turnaround, which includes the publication in the Federal Register.

As you know, sir, we have certain criteria to assure that a new contract is free of manipulation, meets the cash market standards, and also that is in the public interest. We have to assure that these contracts are safe and sound before we approve them.

We will continue to improve on that 90-day turnaround, sir.

Senator COCHRAN. We know the commodity prices in a number of areas have really skyrocketed here this year, and I wonder whether or not this has required any additional supervision or monitoring by the CFTC to be sure there has not been market manipulation or any fraud involved in these very volatile market situations. Have there been any new developments that have been a direct result of this volatility that you have noticed?

Mr. TULL. Sir, it has just enhanced and intensified our surveillance activities, and particularly in the grain markets, as you well know, which are the most volatile at this time. We have increased our presence on the floor itself during trading hours, and certainly have enhanced our scrutiny of large traders who are in the market, what their purpose in the market is, and whether they offer any chance of default in the market. And yes, sir; it has increased our efforts in surveillance, and hopefully under the new budget we will be able to do even a better job.

Senator COCHRAN. Do you think those who use the market to hedge or producers who are trying to lock in a price that they can depend on getting at the end of the crop-year ought to have confidence in the continued integrity of the market?

Mr. TULL. Yes, sir; I do, and I think that it is the CFTC's primary responsibility to protect the general public and to ensure that they do have confidence in the marketplace, and particularly in the price discovery area, which is the whole basis for their income.

COMPETITION WITH FOREIGN EXCHANGES

Senator COCHRAN. Some worry that we are losing a lot of the potential for growth to foreign exchanges. Is this a concern of the CFTC, and what studies or observations have you made that would shed some light on this?

Mr. TULL. Yes, sir; it is a concern of the CFTC, both from a competitive standpoint of our exchanges and also the integrity of our exchanges. I might add that the percentage of the U.S. share of

world trade volume in commodities has decreased over the last several years because of the influx of new commodities markets and exchanges throughout the world. While our percentage of total volume in the world has decreased, our exchanges are having record years. As a matter of fact, the volume on our exchanges has increased some 40 percent since 1992. I think the total effect of this may result not from competitive concerns, but from an interest in new markets in new time zones in certain provincial areas of the world and their own provincial products.

Senator COCHRAN. You mentioned the growth pattern since 1992. I know there was some decline in volume in a couple of those years between 1994 and 1995. Has that been overcome now by a period of renewed growth?

Mr. TULL. I think so. We attribute that, sir, and that decline was more or less, particularly in 1995, in the financial markets, and we attribute that to financial uncertainty last year in financial markets throughout the world. I might add, though, that last year agricultural futures volume increased. They are now 12.5 percent of the market, where I believe in 1994 they were about 10 percent.

I believe there was an article in the press this morning of the tremendous volume increase so far this year on all of our exchanges, I believe something like 150 percent over last year. I think these markets are coming back, and certainly volatility does bring volume and high prices bring volume, and I think they are coming back.

Senator COCHRAN. I notice that the number of registrants, those people who are registered to use the commodity exchanges, firms and individuals, has been about the same. It has remained stable over the past 10 years. Does this mean that there are impediments in the system to introducing new people into it? Is this sort of a closed shop arrangement for any particular reason, or are we seeing an equal number of people entering as are getting out? What is going on?

Mr. TULL. Sir, the only impediment that there is for bringing in new people is purposeful. We do register individuals as brokers, as FCM's, as introducing brokers, as floor traders, whatever. We feel that the high standards that are set by our industry certainly are protection to the public and the general customer. As to why that number has remained static, I have no real answer except maybe they are doing more volume with less people, sir.

SUBMITTED QUESTIONS

Senator COCHRAN. I have a number of questions about some specific issues in the budget request, but I am not going to bore everybody by reading all of them. I think I will submit those to you and ask that you respond for the record.

[The following questions were not asked at the hearing, but were submitted to the agency for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

Question: I note from the table included in the explanatory notes that although there has been dramatic growth in the volume of U.S. futures and options trading from 1992, as you indicate in your written testimony, this growth was most dramatic between fiscal years 1993 and 1994, and it has decreased somewhat between fiscal years 1994 and 1995, falling from 510 million to 505 contracts. Do you expect this decline in volume to continue or do you project continued growth? What accounts for the substantial growth in volume between fiscal years 1994 and 1995?

Answer: The long-term trend of volume in futures markets suggests continued increases in trading volume, although perhaps at a slower rate than in the past. Since 1968, futures and option trading volume has increased in 25 out of 27 years. This record of growth has principally been a function of: (1) a rapid rate of product innovation, *i.e.*, finding new industries in which the price discovery and risk-shifting functions of futures and option markets could be applied; (2) general economic growth -- as an economy grows so does the volume of commodities and financial instruments that must be hedged; (3) liberalization of prices within industries, *e.g.*, the introduction of market-based pricing of currencies in the 1970's and energy prices in the 1980's have increased price variability and, therefore, have increased the need to hedge this price risk; (4) the internationalization of futures markets has led to increased trading both by bringing new capital to U.S. markets and by creating arbitrage trading opportunities versus foreign markets; and (5) the growth of funds traded by professional money managers has brought new money into futures markets.

These factors are unlikely to be reversed. However, as trading volume grows larger, larger absolute growth is necessary to sustain a constant growth rate. At the same time, developing blockbuster new products becomes increasingly more difficult as the better candidate industries have previously been developed and become mature markets. It is possible, therefore, that in the future the rate of growth of trading may slow, although there does not appear to be evidence that this point has been reached.

In the short run, changes in trading are difficult to predict, as they are often caused by market conditions that are variable. The substantial growth in trading volume that occurred between fiscal years 1993 and 1994 was almost entirely caused by growth in interest rate futures and option markets and, in particular, in the Treasury bond and Euro-dollar markets. In early 1994, the Federal Reserve Board acted to increase interest rates, which led to

reversal of the 1993 bull market in interest rate instruments. Declining prices and rising price volatility created increased hedging needs, which caused trading to surge. In 1995, the situation again reversed, with a surging bull market in interest rate and equity markets, but with generally low volatility. This reduced the perceived need to hedge in futures markets.

Question: What has been the growth in the number of actively-traded contracts over the last ten years?

Answer: In 1985, there were 83 futures contracts and 24 option contracts trading. By 1990, there were 92 futures contracts and 50 option contracts trading. In 1995, there were 117 futures contracts and 75 option contracts trading. The total number of traded contracts increased by 79 percent over this ten-year period.

Question: The written statement indicates that the Commission targeted the additional \$4.6 million appropriated for fiscal year 1996 for strengthening the enforcement and market surveillance programs. The summary of increases and decreases in the notes, however, indicates that the **market surveillance, analysis and research program** was decreased by 8 staff years and \$200,000 overall (including a decrease of 3 staff years and \$300,000 for market surveillance); the **enforcement program** was increased by 13 staff years and \$3 million; the **trading and markets program** was increased by 8 staff years and \$1.7 million; and the **proceedings program** was decreased by 1 staff year and \$100,000. Would you please explain how the additional funds were utilized as reflected on this table, particularly the decrease in resources for market surveillance and the increase in the trading and markets program?

Answer: Approximately \$2.7 million of the \$4.6 million increase in fiscal 1996 supports activities of the Commission's Market Surveillance Program. In reviewing the Summary of Increases and Decreases table you will find that the total increase is a net of four activities:

\$2,500,000	Cost of System Upgrade (hardware, software and systems analysis -- displayed in Administrative Management and Support)
82,000	Cost of computer support staff-year in the Chicago Data Center (displayed in Administrative Management and Support)
580,000	Cost of 6 staff-years for increased market oversight (displayed in Contract Markets and Regulatory Development)
(419,000)	Reduction in the number of direct staff-years in the Market Surveillance organization

(temporary decline planned for reversal in fiscal 1997)

\$2,743,000 Increase supporting Market
 Surveillance Program

The Enforcement Program experienced an overall increase of \$1.8 million in fiscal 1996, a net of activities in several organizations:

\$1,340,000 Cost of 17 new staff-years

436,000 Cost related to Agency

Direction

91,000 Cost of staff-year in Office of
 the General Counsel directly
 related to increased enforcement
 workload

(36,000) Reduction of one staff-year in
 Office of Proceedings

\$1,831,000 Increase supporting Enforcement
 Program

The majority of the \$2.7 million increase in market surveillance activities is related to the design and development of an automated market surveillance system as reflected under "Administrative Management and Support." To help in reading the Summary of Increases and Decreases table, please note that the dollars and FTEs that make up the "Executive Direction and Support" program are pro-rated to each of the four major programs to reflect their prorata share of the agency's management and overhead -- "Allocated Direction/Support".

The staffing resources devoted to the market surveillance mission in fiscal 1996 are experiencing changes in two organizations -- the Division of Economic Analysis (DEA) and the Division of Trading and Markets (T&M). In fiscal 1996, DEA is temporarily declining from 86 FTEs to 81 FTEs, mostly in the market surveillance area. These numbers are derived by looking at the FTEs devoted to "Market Surveillance, Analysis and Research," exclusive of the FTEs coming from the "Allocated Direction/Support." An increase to a level of 87 FTEs is planned for 1997, with most of the increase in the market surveillance section.

In T&M, the additional resources in fiscal 1996 are directly in support of market oversight, as reflected under "Contract Markets and Regulatory Development and Registration." They plan additional trade practice and rule oversight, the continued review of automated technology and enhancements to audit trail requirements.

The majority of the increase in support of the enforcement mission is related to the hiring of 17 additional FTEs in the Division of Enforcement.

Question: Following up on this, the written testimony indicates that approximately half of the

\$4.6 million will fund non-discretionary pay increases and new enforcement personnel and the other half will fund a new surveillance system upgrade. Where is the funding for this new surveillance system upgrade reflected in the table summarizing increases and decreases by program?

Answer: The \$2,500,000 earmarked for the surveillance system is reflected in "Administrative Management and Support." These funds are for the software and systems design and analysis related to the upgrade of the system.

Question: The testimony indicates that the CFTC has committed to the full cost of this project in its fiscal 1996 budget. What is the actual amount of the automated surveillance system upgrade?

Answer: We have budgeted \$2,500,000 for this project.

Question: What is it costing the Commission to develop and conduct audit trail tests?

Answer: It is estimated that two staff-years have been expended to date by the Division of Trading and Markets, the Division of Economic Analysis, the Division of Enforcement and the Office of Information Resources Management in designing and conducting initial audit trail tests. We are in the process of automating the test. Once automated, subsequent testing should be accomplished more efficiently. The automation effort is expected to absorb approximately six work months of OIRM staff time in fiscal 1996.

Question: What amount of funding budgeted for FY 1996 for the CFTC Chairman and Commissioners; and any associated staff, is not being spent due to position vacancies.

Answer: We estimate that \$265,000 has accrued through the end of April as a result of vacancies in the Office of the Chairman and the Commissioners.

Question: The budget notes indicate that the 4 additional staff years for market surveillance for FY 1997 are requested to, among other things, continue working extensively with Office of Information Resources Management staff to redesign and upgrade the computer software supporting the Market Surveillance sub-program by integrating daily option large trader reports with daily futures data.

The testimony indicates that the full cost of the automated surveillance system upgrade would be covered in the 1996 budget? What other system upgrades or redesigns are planned for fiscal year 1997 and what is the cost of each?

Answer: Re-engineering the Market Surveillance System is planned and budgeted for \$2,500,000, to be committed in FY 1996 to a multi-year systems development contract. Approximately \$2,300,000 will be expended on the development of the systems design, programming and user training and \$200,000 expended to acquire data base servers to store and process the information. It is expected that this will cover the

entire cost of the new system effort, which will include support for daily collection and review of large trader options positions.

During fiscal 1997, the existing Market Surveillance System will be modified to the extent necessary to meet operational requirements resulting from changes in the markets while the new Market Surveillance System is being developed in parallel. The CFTC also plans to upgrade the Financial Management System to support Electronic Data Interchange and Electronic Commerce with \$150,000 budgeted for this purpose. The Financial Surveillance System and Investigation Support System will be modified to meet emerging operational requirements and audit trail enhancements as they develop, with \$200,000 budgeted for this purpose. Other administrative systems including the Correspondence Control and internal status reporting systems and mission support systems, including tracking of reparations cases and review of sanctions imposed by industry self-regulatory organizations, will also be upgraded, with \$55,000 budgeted for this purpose.

Question: Will the additional 20 staff years and \$1.8 million requested for the enforcement program for fiscal year 1997 complete the needed enhancement of this division or do you anticipate that substantial resources will be needed in future years? What total program level have you determined will be adequate to enable the Commission to achieve the strong, nationwide enforcement presence it believes is necessary to deter and detect abuses effectively and maintain a credible presence throughout the industry?

Answer: Based on our current projections, the 20 staff years and the additional funding requested for fiscal 1997, will enable the Commission to realize its goal of significantly strengthening the Enforcement Program in the upcoming fiscal year. It is difficult to project what the Commission's precise enforcement needs will be in the future. Many factors beyond the Commission's control, including the growth of the industry and market events, have an effect on the demands placed on the Enforcement Division. An adequately staffed and funded Enforcement Division forms the foundation of a strong program. A strong Enforcement Program enables the Division to detect fraud and other illegal activity more quickly and take swift action against wrongdoers. It also enables the Division to dedicate resources to complex matters, shift resources quickly in response to market events, and to support cooperative law enforcement efforts. The Commission is committed to using its resources in the most efficient and effective manner.

Question: One additional staff year is requested for fiscal year 1997 for the Market

Analysis subprogram. The budget notes indicate that this will allow the completion of economic analyses of proposed new contracts and rule changes well within the statutory deadlines. How does CFTC action on proposed new contracts and rule changes now compare with the statutory deadlines? How many new contracts were reviewed this year? How many do you expect in FY 1997?

Answer: The average processing time for new contract approvals has been about ninety days over the past several years, well below the one-year review period provided for by the CEA. In addition, the backlog of pending contracts has been eliminated; new contract applications now are being considered promptly upon submission. The average review time has fallen significantly since the late 1980s and early 1990s, when the CFTC began a program to streamline its review processes and reduce the costs of regulation to focus more efficiently on the ultimate objective -- assessment of a contract's susceptibility to manipulation -- without reducing its commitment to maintaining the integrity of the markets and to customer protection. For rule changes, the average processing time also is significantly less than the 180-day statutory review period, although specific data are not available. The CFTC is committed to continued progress in improving its review procedures to further reduce processing times for designations and rule changes to enhance the exchanges' ability to compete consistent with our obligations to ensure that the requirements of the CEA are met.

As a result of the CFTC program, record numbers of new contracts have been approved in recent years with the average review time remaining at about three months. Through May 7, 1996, the CFTC already has approved 77 new contracts, surpassing the previous record for an entire fiscal year of 48 contracts. The record number of new contract approvals reflects a surge in U.S. exchanges' product-development efforts, representing innovative products in new commodity areas, such as electricity and the debt of emerging markets, as well as new approaches to trading in the traditional agricultural and financial sectors. The CFTC expects the exchanges to continue to develop a large number of innovative contracts. Based on the historical rate of submissions, 48 new futures and option applications are expected to be submitted during fiscal year 1997. Without the additional staff year, the CFTC would not be able to continue its progress in reducing processing times for designations and rule changes so that the exchanges can compete effectively.

Question: The notes indicate that without the additional staff year requested for the Market Analysis subprogram, "the heavy workload likely would result in a growing backlog of applications which may

require the staff to toll the statutory review period more frequently rather than working informally and efficiently with the exchanges to correct many types of contract deficiencies." Please explain. ●

Answer: Section 6 of the Commodity Exchange Act provides that the CFTC can stop the running of the one-year statutory review period for new contracts by sending a letter to the applicant exchange setting forth the material deficiencies. In the past, this was a common practice in dealing with applications with material deficiencies. However, this practice frequently resulted in delays in processing applications in view of the time required by CFTC staff to prepare the formal letter and the time needed by the exchange to prepare a written response. In view of this, the CFTC streamlined its review process in an attempt to facilitate U.S. exchanges' innovation. We eliminated duplicative efforts by the CFTC and the exchanges, reduced paperwork and fees, and adopted internal guidelines so that material deficiencies and other issues are promptly identified and communicated to the exchanges for prompt resolution. This has been accomplished to a large extent through CFTC staff emphasis on both formal and informal meetings with relevant exchange officials to discuss deficiencies in submissions and coordination with other agencies, where appropriate, in order to resolve issues quickly. These internal processing procedures have resulted in a high level of efficiency in processing designation applications and rule changes.

One additional staff year is requested for fiscal year 1997 so that the market analysis subprogram can continue to operate most efficiently and complete its economic analyses of proposed new contracts and rule changes well within the statutory deadlines, while also meeting its new obligation to perform the Commission's review of Part 36 transaction proposals. Without an additional staff year, the economic reviews of new contracts could take longer to complete and could result in a backlog of applications. Also, the staff likely would no longer be able to review prospective applications, which could further add to processing times.

Question: The table in the notes indicates that resources are allocated from each program for Executive Direction and Support. Who determines the level of resources taken from each program? Is this done on a percentage basis? How are those funds then allocated between agency direction; administrative management and support; and the legal counsel?

Answer: When the Commission prepares its budget request, it allocates its staff years among the four program areas as well as the three categories listed as Executive Direction and Support. When the costs of the Executive Direction and Support programs are

determined, the dollars and staff years are allocated across the four program areas on a pro-rata basis.

Question: Please provide a list of all systems acquisition, replacement, and modernization projects funded for each of fiscal years 1994 and 1995 and planned for fiscal year 1996, including the cost and a brief description of each. Also please describe each systems project for which funding is included in the fiscal year 1997 request and those planned for future fiscal years.

Answer: During fiscal 1994, CFTC spent \$942,000 on the acquisition and implementation of improved data communication facilities, network servers and desktop hardware. The data communications network connecting CFTC offices was upgraded by replacing the older low speed serial communications with fractional T1 lines. The local area network servers were replaced with newer high speed network servers, and data base servers for client/server systems development were integrated into the CFTC wide area network. In addition, the oldest one-third of the Commission's desktop computers were replaced with newer hardware capable of supporting client/server applications. A system to track Commission review of proposals for new futures and options contracts was developed for \$75,000. The Market Surveillance, Financial Surveillance and Investigation Support systems were modified to meet new operational requirements, including modifications to displays to handle increased market activity, integration of futures expiring in the twenty-first century, additional capabilities for recording trades and new reports for identifying price movements caused by market manipulation for \$230,000.

During fiscal 1995, a new system for reparations case tracking was initiated. The Reparations Case Tracking System was delivered for testing and review in late fiscal 1995, and early in fiscal 1996 was placed in production at a total cost of \$230,000. Also during fiscal 1995, the Market Surveillance System was modified to provide displays of mid-curve options products, monitor contract market groups, implement new commercial position review rules, and improve flexibility for industry reporting of futures positions for \$160,000, and the Investigation Support System was modified to collect additional information made available by exchange automated trading systems for \$80,000, and the new long range information requirements planning process was initiated.

During fiscal 1996, CFTC is developing its third Long Range Information Requirements Plan at a cost of \$110,000. The requirements for re-engineering the Market Surveillance System are being studied. The re-engineering effort is being performed through a multi-year systems development contract budgeted at \$2,500,000. Approximately \$2,300,000 of this amount will be expended on the development of the systems

design, programming and user training and \$200,000 expended to acquire data base servers to store and process the information. The existing Market Surveillance System is being modified as required to support surveillance of trader groups and stock index futures margin analysis, among other emerging requirements, at a cost of \$120,000. The Investigation Support System is being enhanced to support audit trail reviews and other new requirements at a cost of \$80,000. Several older systems are being re-engineered for the client/server environment, including support for the Proceedings Bulletin System, Rule Review System, and other internal tracking systems at a cost of \$120,000.

During fiscal 1997, CFTC will spend a total of \$405,000 to upgrade the following systems. CFTC plans to upgrade the Financial Management System to support Electronic Data Interchange and Electronic Commerce, with \$150,000 budgeted for this purpose. The existing Market Surveillance System will be modified to the extent necessary to meet operational requirements resulting from changes in the markets while the new Market Surveillance System is developed in parallel. The existing Financial Surveillance System and Investigation Support System will be upgraded to meet emerging operational requirements and audit trail enhancements as they develop, with \$200,000 budgeted for this purpose. Other administrative systems, including the Correspondence Control and internal status reporting systems, and mission support systems, including tracking of reparations cases and review of sanctions imposed by industry self-regulatory organizations, will also be upgraded, with \$55,000 budgeted for this purpose.

In future fiscal years, systems identified as high priority within the Long Range Information Requirements Plan developed in fiscal 1996 will be assigned resources as required.

Question: Please provide a breakdown comparing the FY 95, FY 96 and FY 97 proposed staffing and funding levels for Agency Direction by office (Office of Public Affairs, Office of Legislative and Intergovernmental Affairs, Office of the Inspector General, etc.). Please provide a similar breakdown for Agency Direction.

Answer:

AGENCY DIRECTION

<u>OFFICE</u>	<u>FY 1995</u>		<u>FY 1996</u>		<u>FY 1997</u>	
	<u>FTE</u>	<u>(\$000)</u>	<u>FTE</u>	<u>(\$000)</u>	<u>FTE</u>	<u>(\$000)</u>
1	6	\$ 611	5	\$ 511	5	\$ 529
2	--	--	4	410	4	423
3	2	204	3	307	3	317
4	7	713	6	614	6	635
5	11	1,120	11	1,125	11	1,164
6	4	407	4	410	4	423

7	4	407	4	410	4	423
8	4	407	4	410	4	423
9	4	407	4	410	4	423
10	3	305	4	410	4	423
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TOTAL,	45	\$4,581	49	\$5,017	49	\$5,183

AGENCY DIRECTION

(OFFICE: 1. Chairman; 2. Regional Direction; 3. Legislative and Intergovernmental Affairs; 4. Public Affairs; 5. Secretariat; 6. Inspector General; 7. Commissioner Dial; 8. Commissioner Holum; 9. Commissioner Tull; and 10. Commissioner (Bair/Vacant).)

ADMINISTRATIVE MANAGEMENT AND SUPPORT

OFFICE	FY 1995	FY 1996	FY 1997
	FTE (\$000)	FTE (\$000)	FTE (\$000)
11	6 \$ 495	6 \$ 494	6 \$ 518
12	15 1,236	18 1,482	18 1,555
13	21 1,731	19 1,565	19 1,641
14	12 989	12 988	12 1,037
15	31 4,074	31 6,579	32 5,300
16	4 330	4 329	4 346
	-- -----	-- -----	-- -----
TOTAL,	89 \$8,855	90 \$11,437	91 \$10,397

ADMINISTRATIVE MANAGEMENT AND SUPPORT

(OFFICE: 11. Executive Director; 12. Human Resources; 13. Administrative Services; 14. Financial Management; 15. Information Resources Management; and 16. Library.)

Question: The testimony indicates that the fiscal year 1997 request would put the CFTC at a staffing level of just one percent over fiscal year 1992. Over the past ten years however, CFTC has delegated duties to self-regulatory organizations, releasing staff years and funds for other functions. Please provide a comparison of the Commission's staffing levels over the past ten years which adjusts the Commission's staffing levels to reflect the delegations of duties previously performed by the Commission.

Answer: Since 1987, the Commission has delegated three new functions to the National Futures Association. Two of these were outgrowths of the Futures Trading Practices Act of 1992. The first of these was the registration of floor traders. The CFTC immediately delegated this function to NFA. The second area was in the approval of ethics providers. This was delegated to NFA in 1996. To date, NFA has proposed rules to govern ethics training providers, but these have not yet been approved by the Commission, so CFTC continues to expend staff resources in this area.

The Commission authorized NFA to take adverse action concerning floor brokers, floor traders and applicants for registration in either category

effective August 1, 1994. However, in those cases where there is a potential statutory disqualification but NFA recommends no action be taken against an applicant or registrant, such a recommendation must be forwarded to the CFTC for review. Staff reviews the NFA file and makes a recommendation to the Commission. If the Commission decides not to follow NFA's recommendation, then the Commission would institute adverse action against the applicant or registrant. Thus, the delegation of this function to the NFA has resulted in little, if any, resource savings to the Commission.

These delegations require staff effort to complete and some start-up time in working out programs with the NFA. We estimate that less than two staff years have been saved by these delegations, and these reductions were fully considered in the preparation of the Commission's budget request.

QUESTIONS SUBMITTED BY SENATOR KOHL

Recently, the Food Systems Research Group of the University of Wisconsin-Madison released the results of their 3-year investigation into the problems of the National Cheese Exchange in Green Bay, Wisconsin.

The study highlights the market failures of the National Cheese Exchange. For example, during the study period, less than 1 percent of all cheese in the nation was traded on the market. Yet the price determined by that market acts as a reference price for almost all the bulk cheese in the nation, and greatly influences milk prices paid to farmers as well. Because the market is so thinly traded, it provides opportunities for large traders to manipulate prices.

I realize that the CFTC doesn't have much authority to investigate or regulate cash markets, such as the National Cheese Exchange. However, it is striking to me that some of the same complaints that have been made about the National Cheese Exchange regarding price manipulation potential are some of the very issues that CFTC monitors with regard to trading on futures markets.

Question: What is the relationship between the cheese futures trading prices on the Coffee, Sugar, and Cocoa Exchange, and the weekly cheese prices on the National Cheese Exchange in Green Bay?

Answer: There is a rough correspondence between the National Cheese Exchange prices and the nearby Coffee, Sugar, and Cocoa Exchange futures prices, with futures prices exhibiting greater week-to-week movement than the National Cheese Exchange prices. Furthermore, while the cash and futures prices tend to approach convergence at futures contract expiration, precise convergence has not always occurred.

Question: Given the expertise of the CFTC in surveillance of futures and options trading, would you have any recommendations of ways in which cash markets, such as the National Cheese Exchange in Green Bay, could be monitored or altered to eliminate the potential, or the perceived potential, for price manipulation by large traders?

Answer: Given the decentralized nature of the U.S. cheddar cheese market, and the fact that the National Cheese Exchange and the Coffee, Sugar, and Cocoa Exchange are each thinly traded, it may make sense to consider utilizing a decentralized price reporting and collection scheme for cash market price discovery purposes. Otherwise, the task of eliminating the potential, or the perceived potential, for price manipulation would require measures that would bring liquidity to the National Cheese Exchange.

CONCLUSION OF HEARINGS

Senator COCHRAN. I appreciate the cooperation of the Commission in our review of the budget request. We will do our best with the constraints that we have imposed on us by the budget process to meet the needs of this Commission through funding it at an adequate level so you can discharge the duties and responsibilities you have under the law. It is a very important Commission, and very important work is being done by it.

Mr. TULL. Thank you very much.

Senator COCHRAN. And we appreciate your good efforts.

Mr. TULL. Thank you.

Senator COCHRAN. This concludes today's hearing of our subcommittee. We appreciate the cooperation of all witnesses who have appeared before us this morning. This completes the subcommittee's schedule of regular hearings. We may have oversight hearings at any time on matters coming under the jurisdiction of this subcommittee, but until further business is scheduled, the subcommittee stands in recess.

[Whereupon, at 11:15 a.m., Thursday, May 2, the hearings were concluded and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

MATERIAL SUBMITTED BY AGENCIES NOT APPEARING FOR FORMAL HEARINGS

[CLERK'S NOTE.—The following agencies of the Department of Agriculture and one related agency did not appear before the subcommittee this year. Chairman Cochran requested these agencies to submit testimony in support of their fiscal year 1997 budget request. Those statements follow:]

DEPARTMENT OF AGRICULTURE

CHIEF ECONOMIST

PREPARED STATEMENT OF KEITH COLLINS, CHIEF ECONOMIST

Mr. Chairman and members of the Subcommittee, I am pleased to be able to discuss the organization, mission, functions and fiscal year 1997 budget request of the Office of the Chief Economist--OCE, U.S. Department of Agriculture--USDA.

OCE is a small staff of economists, scientists, meteorologists and support personnel all located in Washington, D.C. The Office, created by the Secretary of Agriculture on October 20, 1994, under USDA reorganization, is part of the Department's Executive Operations which reports to the Secretary of Agriculture. OCE has three primary missions. 1) provide economic analysis to executive branch and Congressional policy officials on alternative policies, programs and regulations; 2) serve as a focal point for the collection and reporting of economic and weather data, forecasts and projections related to agricultural commodities and the performance of the agricultural economy; and 3) conduct statutory review and oversight responsibilities related to risk assessment and cost-benefit analysis of major USDA regulations.

OCE consists of three functional units: the Immediate Office of the Chief Economist, the

World Agricultural Outlook Board and the Office of Risk Assessment and Cost-Benefit Analysis. Activities in each of these three areas are briefly profiled.

Immediate Office of the Chief Economist

The immediate office, with a staff of nine, directs a wide range of analysis related to policy, program and legislative proposals. The focus is on only the most substantial, complex and controversial issues, often at the request of the Secretary, other Administration officials or members of Congress. The most important products are briefings, and briefing and analysis papers prepared on tight deadlines for the Secretary, the Executive Office of the President and the Congress. These analyses generally focus on short- to medium-term effects and apply the results of basic economic research to specific policy issues. The immediate office staff is also responsible for regulatory review. A key role of the staff is to coordinate analyses among USDA agencies. OCE staff includes the directors responsible for coordinating agricultural labor issues and sustainable development issues within USDA.

Since late 1994, the staff of the immediate office has had a series of key responsibilities related to the Farm Bill. OCE coordinated development of the Administration's position on the Federal Agriculture Improvement and Reform Act of 1996--FAIR Act-- and was responsible for producing the so-called "Blue Book," a statement of principles and proposals for the FAIR Act. In the process, OCE served on the USDA Farm Bill Task Force, coordinated USDA's economic analysis of FAIR Act options, prepared papers and briefings for White House staff on FAIR Act issues, and co-chaired two White House Farm Bill Task Forces. OCE also organized and chaired USDA's Interagency Dairy Analysis Team which conducted numerous analyses of dairy options at the request of the House Committee on Agriculture. OCE also briefed the President and the Vice President on FAIR Act issues during fiscal year 1995.

During the past year, the staff has responded to numerous Congressional requests for analysis, many related to commodity programs. During fiscal year 1995 and early fiscal year 1996, OCE testified before Congress as the principal USDA witness nine times. Testimony was provided on the following issues: the performance of pork prices; the effects of acreage reduction programs;

U.S. dairy policy; dairy export market prospects; effects of ending the wool and mohair programs, the role of taxes for farmers, the effects of immigration reform on agricultural employers, regulatory reform, and risk assessment.

OCE has coordinated a number of special studies bringing together analysts from various USDA agencies to ensure the best expertise addresses the issue. For example, OCE has responded to requests for rapid analysis of issues such as the degree to which farm program changes have been equitable across commodities, the effects of marketing loans, the factors behind the increase in imports of Mexican tomatoes and the effects of the H-2A Temporary Foreign Worker Program. OCE provided direct support to the Secretary on a range of international economic issues, including U.S.-EU grain and oilseed Uruguay Round concerns, NAFTA, and regionalization of plant and animal health regulations.

A major responsibility of the immediate office staff is to review and clear regulatory impact analyses of USDA regulations. During fiscal year 1995, OCE reviewed and cleared 85 significant or economically significant regulations. Often this process involved returning the analysis to the regulating agency for additional analysis or consideration of alternative regulatory options. Examples of special rulemaking efforts this year involve providing analytical support for the final rule for the Hazard Analysis and Critical Control Point--HACCP--meat processing control system and the Conservation Reserve Program early contract release.

World Agricultural Outlook Board--WAOB

The WAOB prepares world agricultural and weather assessments and coordinates USDA's work related to agricultural outlook, projections, weather, and remote sensing. The Board, with a staff of 25, issues monthly forecasts known as the *World Agricultural Supply and Demand Estimates* report and oversees long-term USDA forecasts required for preparation of the Federal budget. The Board also operates and manages the Joint Agricultural Weather Facility--JAWF--in cooperation with the National Oceanic and Atmospheric Administration--NOAA, and is home to the Department's Chief Meteorologist. In addition, it provides technical assistance and coordination for USDA's remote sensing activities.

Coordinating USDA Economic Forecasts. The WAOB plays a critical role in assuring that the Department's commodity information system responds to today's rapidly changing world. The

Board's mission is to ensure that USDA's intelligence on domestic and foreign agricultural developments is timely, accurate, and objective, and to speed the flow of that information to producers, consumers, and policy makers.

One of WAOB's primary functions is to coordinate and review all USDA forecasts and analyses of foreign and domestic commodity supply and demand conditions. The WAOB's staff chair Interagency Commodity Estimates Committees. The purpose of these committees is to assure that sound information from domestic and international sources is fully integrated into the analytical process and that USDA economic forecasts are objective and consistent. The committees, with representatives from the Economic Research Service, Farm Service Agency, Foreign Agricultural Service, Agricultural Marketing Service, and WAOB, are responsible for developing official estimates of supply, utilization, and prices and reviewing economic reports issued by USDA agencies. In fiscal year 1995, the Board reviewed and approved for release more than 225 such reports.

Each month, WAOB publishes the *World Agricultural Supply and Demand Estimates--WASDE--* report, which forecasts production, trade, utilization, prices and stocks. Coverage includes U.S. and world grains, oilseeds, and cotton and U.S. livestock products and sugar. Release is simultaneous with the *U.S. Crop Production* report. WASDE is internationally viewed as a benchmark for agriculture and provides timely knowledge of world food markets that is increasingly critical to our export-led farm economy.

Equally important, the WASDE report gives early warning of changes in U.S. and world crop supplies and stocks. Over the past year, monthly assessments in the WASDE report provided early warning of reduced crop production and supply prospects in the United States and in other countries. In June 1995, following adverse spring weather and planting delays, the Board for the first time lowered its June estimates of planted corn and spring wheat below those in the March *Prospective Plantings* report. Survey-based estimates of U.S. crops in the summer of 1995 eventually confirmed the accuracy of the Board's June assessment. While U.S. and foreign crop prospects continued to fall, the WASDE report forecast that growth in world food consumption would continue at a strong pace. This global disparity was evident in the report, which showed progressively lower crop stocks at the end of the 1995/96 marketing year. When stock levels are

compared with annual usage levels in the balance sheet, stocks/use ratios are reaching historic lows, signaling the need to closely monitor food needs in the most vulnerable nations

Monitoring Weather Impacts on Agriculture. USDA places a high priority on incorporating weather-based assessments into all analyses. The focal point for this activity is the JAWF, operated jointly by the WAOB and NOAA of the Department of Commerce. The JAWF staff continually monitors and assesses global weather and its probable impact on agricultural output. JAWF briefings, reports and special alerts are key inputs to the development of USDA crop yield estimates for both competitors and customers in world markets. JAWF weather assessments are widely available to the agricultural community and are made available to the public through the *Weekly Weather and Crop Bulletin*, USDA's electronic dissemination network, and radio and television.

Disseminating USDA Numbers to the Public. As commodity prices are affected less by Government programs and more by market forces, the need for objective and current information is becoming especially critical. The WAOB recognizes the need for rapid information dissemination and strives to place the WASDE report into the hands of farmers and other users as quickly as possible. The goal is to provide simultaneous access at low cost to all market participants.

The urgency of providing quick access to USDA crop forecasts is underscored by last year's change in the release time of the WASDE and the Crop Production reports from 3:00 p.m. to 8:30 a.m. Eastern Time, giving American farmers and commodity markets earlier access to new estimates and allowing them time to react before major foreign futures markets open. Secured facilities are now provided to news agencies, enabling them to enter the lockup area prior to 8:30 a.m. and transmit stories electronically at the moment of release. This change makes forecasts immediately available to electronic news services and farm broadcasters who inform the public before commodity markets open.

The WAOB, the National Agricultural Statistics Service and ERS have developed new channels for making information easily available to the public. The three agencies in cooperation with Cornell University have created a single Internet site for USDA economic and statistical reports and data bases. Market-sensitive reports can be viewed or downloaded shortly after

release. Recent enhancements include a new USDA World Wide Web home page with an online search option that allows end users to easily locate reports. Prior to the development of the home page, economics and statistical reports were housed on a gopher server that provided no search capability. Other options for easy access have been developed that allow the public to get reports automatically by electronic mail, retrieve them with a fax machine or download them from a dial-up bulletin board, all at no charge.

Oversight of Long-Term USDA Commodity Projections. WAOB chairs the Department's Interagency Agricultural Projections Committee, leading the effort to improve long-term commodity baseline projections. The WAOB ensures a strong multi-agency effort and sound analytical procedures underlie USDA's long-term projections, which are used to develop the budget baseline for farm program spending and are shared with CBO, universities and the agriculture industry.

The WAOB conducts the Department's annual Agricultural Outlook Forum, a public meeting on farm, food, and trade prospects, which attracts about 700 participants annually. The focus of the February 1996 Agricultural Outlook Forum was international trade. Leading farm officials from other nations, U.S. and international organizations, and agribusiness discussed trade prospects and issues. Updated long-term projections, released at the Forum, indicated continuing strong growth trends in world food consumption and agricultural trade that are significant for U.S. farm export and price prospects.

Supporting USDA's Remote Sensing Activities. In its role as the Department's coordinator of remote sensing work, the Board works to enhance the abilities of USDA's remote sensing agencies. For example, the WAOB's remote sensing coordinator obtained use of sophisticated global positioning system--GPS--technology for the Foreign Agricultural Service--FAS--at no cost to the Government. After a successful trial by analysts surveying a drought in Australia, FAS decided to purchase GPS equipment for its travel teams.

The Board alerted USDA remote sensing agencies to problems with the Landsat satellite system and the need to request corrective action before needed data became unreliable. On behalf of USDA agencies, the Board asked Landsat managers to conduct a low risk satellite repositioning maneuver, which was completed in December. During the past year, the Board also

coordinated technology surveys that identified the imagery requirements of Department users of remote sensing imagery; represented USDA on interdepartmental committees; and coordinated preparation of USDA's input to the annual Aeronautics and Space Report of the President

Adjusting to Reduced Resources. As the Federal Government is downsized, the Department is challenged to maintain the quality and scope of its forecasting work, especially in the international area. The value to the public of USDA forecasts derives from objectivity and the synthesis of a vast amount of information, domestic and international, provided by participating agencies. Resource redirections and reductions in agencies represented on the Interagency Commodity Estimates Committees are diminishing the Department's capacity to collect and analyze foreign information and developments.

During fiscal year 1995, the WAOB changed analytical procedures to minimize the impact of downsizing on supply and demand estimates. Existing data series were revised, new data series were developed, and analytical relationships were reformulated, especially for the European Union, former Soviet Union, and China. These adjustments have enabled the WAOB to continue producing high-quality forecasts and policy analysis scenarios.

Office of Risk Assessment and Cost-Benefit Analysis--ORACBA

The principal task of ORACBA, with a staff of three, is to promote effective and efficient USDA program regulation of hazards to human health, human safety and the environment. This is accomplished by bringing science and management together in policy and regulatory development. By statute, ORACBA is required to ensure that the analysis supporting a major rule proposed by USDA includes a risk assessment and a cost-benefit analysis that are performed consistently, and use reasonably obtainable and sound scientific, technical, economic, and other data. ORACBA serves as a reservoir of expertise for analyses and information resources for conducting risk assessments and cost-benefit analyses and works with USDA agencies in coordinating analyses supporting major regulations. ORACBA also supports the development of education and training programs, information systems, and other analytical support programs for the effective performance of risk assessments and cost-benefit analyses. These and other activities are undertaken to assure USDA leadership that reviews of risk assessments and cost-benefit analyses will be thorough, that the regulation reflects the scientific and economic analyses and

advances the purpose of protecting against the identified risk. Overall, the regulation must reduce risks to human health, human safety, or the environment in a cost-effective manner.

Current Progress in Expanding USDA Risk Assessment Capabilities. ORACBA programs for education, training, and analytical support are the primary means for bringing about an integration of risk assessment and USDA regulatory impact analysis. In June 1995, ORACBA worked with the Animal and Plant Health Inspection Service to organize a USDA workshop on risk assessment methods for evaluating environmental risk. Several workshops are planned for fiscal year 1996. In April, a half-day workshop will provide USDA executives information on how risk assessment and cost-benefit analysis can aid regulatory development and program management. In June, a 4-day, introductory workshop will be conducted for acquainting USDA analytical support personnel with basic risk assessment concepts and methods. An advanced workshop in August will be held to demonstrate quantitative approaches to risk assessment with a review of computer applications supporting risk methods. Our experience in these courses will provide the basis for a long-range plan for risk assessment training and education in USDA.

ORACBA's Risk Forum, a monthly seminar series on risk assessment issues, has been underway since September 1995. The seminar has been well received by USDA staff and has attracted high caliber speakers from throughout the Washington, D.C. area. The second issue of the ORACBA Newsletter has been published and is becoming an important communication vehicle for the growing USDA risk assessment community. More than 400 copies of the first issue were distributed. ORACBA will have an Internet site in the near future to further provide opportunities for enhancing risk assessment and cost-benefit analysis activities in USDA.

Conducting Risk Assessments and Reviews. In order to accomplish the mission of conducting and reviewing risk assessments with only a very small coordinating office, ORACBA has organized several technical work groups utilizing the analytical staffs of other agencies. These groups will coordinate USDA risk assessment and economic analysis, research, and review activities related to major rules. The Food Safety Risk Assessment Work Group has been active in the research and development of risk assessment methods for evaluating food borne pathogens. Several members are participating on the review team organized by ORACBA to evaluate the analysis of the HACCP/Pathogen Reduction final regulation now being developed by USDA.

Another group, the Regulatory Analysis Work Group, has a primary goal to provide early identification of major rules requiring a risk assessment and cost-benefit analysis, and the coordination of USDA resources to conduct the supporting analyses. The Group's major near-term goal is to identify hazards managed by USDA programs and develop a database describing these programs. The longer term goal is to support and encourage a holistic look at managing risks within USDA. ORACBA also plans to organize an Ecological Risk Assessment Work Group and a Risk Assessment Methodology Work Group by June 1996. The membership of these technical work groups is to comprise staff from USDA program and research agencies.

In addition to efforts on the HACCP/Pathogen Reduction rule, over the last several months ORACBA has provided scientific and technical review for proposed rules or reports concerning avocado imports, methyl mercury--at the request of OMB, oxygenated fuel guidelines--at the request of NSTC, and seafood HACCP--at the request of OMB.

Fiscal Year 1997 Budget Request for OCE

For fiscal year 1997, OCE is requesting \$4,292,000 in direct appropriations. This request represents a net increase of \$405,000 over the fiscal year 1996 adjusted base. The proposed budget includes an increase of \$91,000 for the annualization of the fiscal year 1996 pay raise and the anticipated fiscal year 1997 pay raise, and \$341,000 are for the following:

An increase of \$280,000 to support full funding of the Office of Risk Assessment and Cost-Benefit Analysis. This funding would provide sufficient resources for ORACBA to fulfill its mission. Created in fiscal year 1995, ORACBA has identified and initiated a program of work during fiscal year 1996 that will be intensified in fiscal year 1997. The increased funding would provide for acquiring added expertise, including details of USDA analytical staff to ORACBA, that is needed to supplement the skills and knowledge of the core group in order to carry out ORACBA's mission. The added funds would also be used for: 1) expanding training for USDA staff, including maintaining the risk forum seminar series that brings well-known risk assessment professionals to USDA to share information, developing short courses for staff, providing specialized training for the work groups established during fiscal year 1996, and granting specialized training for individuals with special risk assessment-related interests and needs; 2) establishing a peer review science advisory board for risk assessments; 3) funding the

development of models to evaluate hazards to ecosystems, modeling that is now largely undeveloped for agricultural ecosystems; 4) funding longer term projects with academic collaborators in the land grant, 1890, and Native American schools to develop risk assessment capacity and to address areas that now lack sufficient research methods; and 5) supporting the continued development of database and information systems to support risk assessments at USDA.

An increase of \$61,000 to support a Geographic Information System--GIS--Weather Information Processing System. This funding initiative will enhance USDA's ability to assess the impact of weather on global crop production. Weather data from 8,000 global weather stations, obtained daily from the World Meteorological Organization through the National Weather Service--NWS, are continuously processed and analyzed to determine the impact of weather on global crop production. Technology currently employed for this purpose is more than a decade old and not compatible with modernized equipment being installed by the NWS. Incompatibility and downtime have impaired USDA's ability to access weather information in a timely and routine manner.

A major element of this proposal is to install GIS technology on modernized USDA equipment. GIS software has been developed which can be adapted to agricultural applications, allowing meteorological and agronomic data to be overlaid on a detailed map for real-time analysis. In addition to monitoring daily weather, the new system will be used to map and assess the impacts of such anomalies as radiation releases into the atmosphere and volcanic eruptions. Also, flood and drought analyses will be more precisely defined in geographic area and time. This technology will enable the JAWF to perform analyses within crop areas with greater precision, improving the accuracy of weather/crop impact assessments. The annual cost of \$61,000 includes \$25,000 for software development, maintenance and technical support, \$24,000 for GIS hardware, maintenance and replacement costs; and \$12,000 for communications.

These increases are partially offset by a decrease of \$27,000 to implement the President's Executive Order to reduce overhead-type spending.

That concludes my statement Mr. Chairman. I would be pleased to respond to questions.

**NATIONAL APPEALS DIVISION
PREPARED STATEMENT OF NORMAN G. COOPER, DIRECTOR**

Mr. Chairman and members of the Subcommittee, I am pleased to appear before you to discuss the fiscal year 1997 budget request for the Department of Agriculture's National Appeals Division--NAD.

MISSION

NAD was established as mandated by the Department of Agriculture Reorganization Act of 1994. The creation of NAD consolidated the appellate functions and staffs of several former Agencies within the Department of Agriculture--USDA--in order to provide for independent hearings and reviews of adverse Agency decisions. NAD is headquartered in Alexandria, Virginia, with a small review and support staff. The structure of the National Appeals Staff of the former Farmers Home Administration provided NAD's organizational framework with regional offices supervising the activities of more than 70 hearing officers in three geographic areas: Eastern--Indianapolis, Indiana, Southern--Memphis, Tennessee; and Western--Lakewood, Colorado.

NAD's mission is to conduct impartial administrative appeal hearings of adverse program decisions made by officers, employees or committees of designated Agencies of the Department and to conduct reviews of determinations issued by NAD hearing officers when requested by either party to the appeal. NAD currently handles appeals arising from the Farm Service Agency, including Risk Management, Natural Resources Conservation Service, Rural Utilities Service, Rural Business-Cooperative Service, and Rural Housing Service. Appeal hearings may be requested by USDA program participants and Director's Reviews may be requested by either program participants or the head of the Agency that issued the adverse decision. Upon timely request for a hearing, a program participant has the right to have an in-person hearing within 45 days in the participant's State of residence, unless the participant agrees to a hearing by telephone. On request, the Director may reconsider a review determination if certain criteria are met. A final determination of NAD is reviewable by a United States District Court.

CURRENT ACTIVITIES

Recent accomplishments include:

- NAD rules and regulations were published on an interim final basis on Friday, December 29, 1995
- During fiscal year 1995, NAD handled 6,858 appeal cases and 1,445 Director's Reviews. Of the 1,445 Director's Reviews, 1,305 were requested by program participants and 140 were requested by Agency heads. NAD also responded to 295 Congressional and general correspondence, 46 Freedom of Information Act--FOIA--Privacy Act requests and appeals, and prepared 18 case records for litigation. NAD is reviewing the cost of mailing all determinations certified mail and developing a tracking system for this process in order to conform with appellate filing requirements.
- At Secretary Glickman's request, the Director completed a review of NAD's structure and procedures. The Secretary approved the Director's recommendations.
- NAD has scheduled training for hearing officers, review and senior support staff next month covering a wide range of subjects including program provisions and NAD regulatory functions involving standards of review, evidentiary considerations and jurisdictional issues. Additionally, NAD employees will obtain ethics, Equal Employment Opportunity, FOIA/Privacy Act and sexual harassment training.

FISCAL YEAR 1997 BUDGET REQUEST

For fiscal year 1997, NAD is requesting \$13,363,000 in direct appropriations. This request represents an increase of \$1,517,000 over the fiscal year 1996 appropriation. The increase is comprised of \$148,000 for increased pay costs, and the remaining \$1,369,000 will fund restructuring and office consolidation activities, consisting of the following three major components

The first component enables NAD to operate and maintain its own communications network. This capability is critical to fulfillment of NAD responsibilities to Congress and the public. NAD currently has 3 regional offices and 65 field offices located in 37 States. It is important that all staff have reliable network capabilities to communicate with other NAD staff

and customers within required time frames. For example, a request for a Director's Review by the Agency head must be submitted within 15 business days by law. Because NAD is a geographically dispersed organization, a direct communication network is essential. In addition, NAD presently uses an inherited tracking system to monitor appeals at the hearing and review levels. The current tracking system is not adequate to fulfill NAD's monitoring and reporting needs and limits our ability to provide Congress and USDA critical data regarding the appeals handled by NAD. The tracking system must be modified or a new system designed and put in place to provide this information.

The second component provides needed training to NAD employees. In order to maintain the best qualified cadre of personnel possible, NAD must provide development opportunities to ensure that personnel are kept current of administrative proceedings, current laws and regulations. This training is essential to ensure NAD remains capable of providing the most efficient, quality service possible for parties to appeals. Additionally, the reorganization consolidated staff from four different Agencies. As laws--this is a farm bill year--and program regulations change, NAD employees require training in the several program areas that are subject to NAD jurisdiction. The geographically dispersed nature of the organization makes common training costly and NAD continually uses as appropriate, less costly, methods of common training such as tele-video conferences. Individual training for hearing officers and review staff is critical, especially with new employees.

The third component allows for the acquisition of equipment to conduct hearings and reviews in conformance with the authorizing legislation and regulations. NAD's current equipment consists of laptop and personal computers that are obsolete by two to three generations and lack the necessary memory and hard drive capabilities to run modern software packages. In addition, the former appeals staff brought to NAD a variety of software packages and different computer capabilities, most of which are not compatible. NAD requires a compatible computer system to provide quality internal and external customer service in an efficient manner.

NAD has streamlined its organizational structure to effectively and efficiently carry out its statutory mandate. In order to sustain its mission in delivery of high quality adjudication,

administrative appeals and reviews, NAD requires the appropriation requested. As a new organization, NAD has an opportunity to create an organization and culture with the best features of a government that serves the people. However, this can only be continued with funding as requested.

This concludes my statement, Mr. Chairman. I will be happy to answer any questions the Committee might have.

OFFICE OF THE CHIEF FINANCIAL OFFICER
PREPARED STATEMENT OF IRWIN T. DAVID, ACTING CHIEF FINANCIAL
OFFICER

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to appear before you today to present the President's budget proposal for USDA's Office of the Chief Financial Officer --OCFO-- and the Department's Working Capital Fund. With me today are Allan Johnson, the Department's Associate Chief Financial Officer, and Constance Gillam, my budget officer.

I would like to discuss OCFO's new organization structure, our progress on moving toward improved financial management for the Department, the appropriation request for this office, and the Departmental Working Capital Fund --WCF--, with special emphasis on the National Finance Center.

Since our last hearing, the Office of the Chief Financial Officer has reorganized in accordance with USDA's overall reorganization and the Chief Financial Officers Act of 1990. I believe this reorganization will enable us to fulfill our mission "to provide, through partnerships with USDA agencies, financial management leadership and service to support quality program delivery by USDA."

Functions formerly delegated to the Office of Finance and Management and to the immediate office of the Chief Financial Officer --CFO-- are combined to create the Office of the Chief Financial Officer.

There are seven activities under the new structure that report to the Chief Financial Officer:

1. National Finance Center,

2. Financial Information Systems Vision and Strategy--FISVIS--a major project aimed at improving financial management in USDA,
3. Financial Systems, Reporting and Analysis Division,
4. Planning and Accountability Division,
5. Fiscal Policy Division;
6. WCF, Budget, and Fiscal Services Division and
7. Executive Services Staff.

This new organization is flexible and structured to meet the current priorities of USDA

and the responsibilities conferred by the CFO Act of 1990, the Government Performance and Results Act of 1993, and the Government Management and Reform Act of 1994. It enables the CFO to provide leadership, assistance, and oversight to financial management systems processes, personnel and activities, and improves our ability to carry out the responsibilities mandated by the CFO Act, among which are:

1. Developing and maintaining integrated accounting and financial management systems;
2. Directing, managing, and providing policy guidance and oversight of all agency financial management personnel systems, activities, and operations;
3. Approving and managing financial management systems design and enhancement projects;
4. Developing budgets for financial management operations and improvements;
5. Overseeing the recruitment, selection, and training of personnel to carry out agency financial management functions;
6. Implementing agency asset management systems, including systems for cash management, credit management, debt collection, and property and inventory management and control; and
7. Monitoring the financial execution of the agency budget in relation to actual expenditures; and
8. Advising the Secretary and other policy officials on financial management matters

Managers throughout Government, and certainly in USDA, are being asked to do more with less. We believe this new organizational structure will help us to meet the financial management needs of USDA and to satisfy the requirements of the CFO Act within current staffing and budget levels.

Financial Information Systems

OCFO recognizes that Federal managers need timely, accurate, consistent, reliable and useful financial information to make effective decisions about program and service delivery. We are committed to improving the timeliness and quality of financial information as well as improving the financial systems that provide that information. USDA operates numerous financial systems, and we have, therefore, placed a high priority on correcting systems deficiencies and strengthening central oversight and coordination. Efforts currently underway are part of an overall program to modernize and consolidate stovepipe systems, eliminate unnecessary subsystems, and to bring systems into compliance with Federal standards. An important component of this effort, the Financial Information Systems Vision and Strategy --FISVIS-- project, is financed through the Departmental Working Capital Fund and is discussed in greater detail later.

Strategic and Performance Planning

OCFO provides leadership to USDA agencies in developing strategic plans and performance measures under the Government Performance and Results Act of 1993 and the Chief Financial Officers Act of 1990. USDA is developing strategic plans for each mission area and agency. We will have performance measure information for the major appropriation accounts for the fiscal year 1998 budget. The Congress, the Administration, and the American taxpayer expect results for the appropriations enacted and expended on Federal programs. USDA program and policy officials must be able to articulate their goals and accomplishments. Thus, under OCFO leadership and coordination, we are continuing to develop and refine strategic and performance plans and measures. The initial investments in sustained strategic planning and performance measurement -- results management -- will be returned to the Department in terms of both higher levels of accomplishment and the elimination of unnecessary control systems.

Audited Financial Statements

The Federal government has not had an independent review of its financial reports and systems for the benefit of Congress or for the benefit of the taxpayers. This practice is changing.

The CFO Act of 1990 required audited financial statements for specified pilot departments, including USDA. The Government Management Reform Act of 1994 extends the requirement to all major Federal agencies and departments and, beginning in fiscal year 1997, to the Government as a whole.

In USDA we prepare departmentwide consolidated financial statements. In addition, seven major agencies prepare agency specific statements, which are incorporated into the consolidated statements for the Department. These statements have been audited by the Office of the Inspector General --OIG-- since fiscal year 1991. For fiscal year 1994, we received four unqualified --or clean-- audit opinions, two qualified opinions, and two disclaimers of opinion-- including a disclaimer of opinion on the Department's consolidated financial statements. The two qualified opinions were based on one or more material control weaknesses and nonconformances with laws or regulations. The two disclaimers of opinion arose from material control weaknesses that were considered by the auditors to be more significant or prevalent. While USDA has made progress in correcting such deficiencies, much more remains to be done to improve our financial systems. Critical improvements in systems and processes are underway with the goal of receiving unqualified opinions on all of our financial statements as quickly as possible.

Cost Management

The OCFO is developing and implementing cost accounting and activity-based costing systems to assist in performance measurement, reengineering and rightsizing efforts. The ability to more accurately determine the costs of an activity will enable USDA and decision-makers to identify where value is added or not and to target appropriate areas for cost reduction. Managers, at all levels, need to be aware of total program costs and the value of program outcomes.

We face serious challenges. Budgets are being reduced and program effectiveness is being questioned at every turn. Our managers need better financial and management information to meet these challenges.

We would like to apply cost accounting and cost management processes across the Department, especially in the area of fees, royalties, rents, and other charges. USDA currently collects over \$2.5 billion through various fee and other charge programs. The ability to determine, charge for, and recover full costs is directly supported by the availability of relevant, accurate, timely, complete, consistent, and readily understandable cost information.

Through the use of cost management principles, our new financial information systems will allow USDA to reduce costs and improve services. Several current projects and initiatives demonstrate our effectiveness in providing better and less expensive cost information for improved decision making. For example, we have utilized activity-based costing to reduce costs while improving management control processes, the provision of administrative services, and the transfer of funds. The OCFO is leading the way toward developing better cost accounting and cost management techniques for the Department.

Building a USDA Financial Management Community

The OCFO is vitally concerned with developing a strong financial management community in USDA and has formulated a multifaceted plan for building a cohesive financial management group within the Department.

The CFO meets monthly with agency Controllers, who serve in an advisory capacity to the CFO, to coordinate activities and ensure consistency of processes and information across all USDA agencies.

OCFO staff, in coordination with the CFO Advisory Group, is developing a comprehensive financial management training plan that incorporates elements of successful financial management training programs in the public and private sectors.

FISCAL YEAR 1997 BUDGET REQUEST

In order to continue addressing the financial management needs of the Department, we are requesting a budget of \$4,437,000. This is an increase of \$133,000 over our fiscal year 1996 current estimate. This modest increase covers the costs of the current staff on board and is

comprised of \$154,000 for pay costs and a decrease of \$21,000 in support of the Administration's streamlining efforts to reduce overhead-type costs.

WORKING CAPITAL FUND

Finally, Mr. Chairman, I would like to provide for you an overview of our activities and plans for our Departmental Working Capital Fund for fiscal year 1997.

Background

As a revolving fund, the Working Capital Fund --WCF-- supports activities of a commercial nature that provide goods and services on a reimbursable basis. No appropriated funds are used for recurring operations. This financing method requires us to be very sensitive to both our customers' needs and their ability to pay for services. However, we must balance the need for economy in current operations with the need to invest in systems and services that offer the promise of cost avoidance in the future. I believe that the resource estimates presented to the Committee successfully address each of these needs.

Fiscal Year 1997 Operations

The WCF will support 22 activities in three Department-level offices in fiscal year 1997: the Office of the Chief Financial Officer, the Office of the Assistant Secretary for Administration, and the Office of Communications. Our estimate of fiscal year 1997 operating costs is \$206.8 million, a 3.2 percent increase over our current fiscal year 1996 estimate. However, costs to USDA agencies will rise by less than 2 percent, including needed investments in financial and administrative systems. Headquarters FTEs will be reduced by 8.8 percent. These accomplishments are the result of a concerted effort on the part of the managers of our respective WCF activity centers, the representatives from USDA customer agencies that serve on our WCF advisory committee, the Assistant Secretary for Administration, the Controller of the WCF, and my office. I would like to describe several specific initiatives to be pursued in fiscal year 1997.

Cross-Servicing

As you know, Mr. Chairman, the moratorium we had on cross-servicing at our National Finance Center was lifted last year. With improvements in our various systems, we are poised to

respond to new demand for services from non-USDA agencies and look forward to working with agencies across the Federal government to reduce the costs of financial and administrative services. The NFC has been marketing its services throughout the Federal community. We expect commitments to be made as a result of such efforts, and after completing the developmental work to initiate and bring on-line new cross-servicing demand, our efforts will bear fruit in reduced unit costs for NFC services for all users. For now, cross-servicing workload estimates reflected in the fiscal year 1997 estimates project new payroll/personnel business equal to that lost due to downsizing in our customers' organizations. The Capitol Police and the Federal Mediation and Conciliation Service have made firm commitments. Discussions are now underway with other agencies that might lead to significant additional payroll/personnel business in fiscal year 1997 or 1998.

Financial Information Systems Vision And Strategy

We are continuing to move forward with our major developmental initiative -- the Financial Information Systems Vision and Strategy --FISVIS-- project. Systems development activities now underway move us toward a financial information system that will be "user-friendly," allowing agencies the maximum flexibility in meeting their unique financial management requirements and providing managers with timely and accurate financial information, while enabling us to achieve an integrated system that can respond effectively to internal and external financial management needs.

Systems development work is focusing on implementing the FISVIS system, including updating automated financial information systems of the National Finance Center, systems that while still effective, will be inadequate as we move into the next century.

National Finance Center System Modernization

In addition to the FISVIS effort, there are a number of other modernization projects underway at the NFC. Such projects are important to meet the twin goals of effectiveness in the delivery of services and in economy for our customers. One of the most promising areas for cost reductions is the purchasing process, a very labor intensive undertaking. NFC is implementing, in coordination with the Modernization of Administrative Process --MAP--, under the Assistant Secretary for Administration, an initiative for a new bankcard system that will eliminate

paperwork and reduce costs associated with the purchasing process. In addition, we plan to take advantage of electronic data interchange --EDI-- processes. We are implementing an EDI pilot with utility vendors, and we expect to expand this effort to other applications over the next several years as other industries invest in this technology, primarily, the telecommunications industry.

Some modernization efforts are aimed at helping agencies meet their streamlining goals. The bankcard system I just noted will help in this area by saving resources in the agencies, as well as at NFC. Other projects, such as efforts in the payroll/personnel system, are in response to the user community requirements to develop more efficient systems to save time and effort.

These efforts are important if the NFC is to maintain its preeminent position as a provider of financial and administrative services. As part of the overall modernization effort, the NFC is improving its systems development process in accordance with computer industry standards. In addition, upgraded software features, such as Windows-like, icon-driven screens are being added. A front-end personnel system is being developed that will capture data from initial personnel request forms that will feed into electronic forms sent to NFC's integrated payroll/personnel system, thereby reducing redundant data entries by personnel staffs. For the long-term, we are planning for a complete redesign of the payroll/personnel system, taking advantage of emerging technologies and the lessons we have learned from years of effective systems development and operation.

Unit Costs/USDA Costs

Being sensitive to our customers' ability to pay for services supported by the WCF is reflected in efforts to reduce the price customers pay for service -- the cost for a unit of service. Keeping unit costs down is the clearest indicator of our ability to deliver services efficiently. Over a five-year period, from fiscal year 1992 to fiscal year 1997, unit costs will have been reduced significantly in our largest systems. In ADP Services, unit costs for mainframe computing services will have been reduced by about 52 percent. In inflation-adjusted dollars, the reduction will be almost 58 percent. Costs to payroll an employee in our Payroll/Personnel System at the National Finance Center will have been reduced by about one percent. Using constant dollars, that is, adjusting for inflation, the reduction in unit costs is about 12 percent.

Reductions in unit costs indicate efficiency, but there are "bottom line" effects of our efforts as well. For example, in fiscal year 1997, total costs to USDA agencies for common supplies purchased through our Central Supply Stores operation will be reduced by 4 percent; total USDA costs for Central Mail Services will be reduced by about one percent; and total costs to USDA agencies for the National Computer Center/Mainframe will be reduced by almost 3 percent. These efforts translate into real reductions for customers, making them better able to address their own program and administrative needs as their budgets are tightened -- another example of our being sensitive to both our customers' needs and their ability to pay for services.

Conclusion

Mr. Chairman, in a tight budget environment, all of us are looking for ways to reduce costs, particularly for administrative services. The activities supported by the WCF have a long record of success in achieving that goal, and I believe that the fiscal year 1997 estimates continue that track record. I appreciate the opportunity to come before the Committee today. I would be happy to respond to any questions you or the other members of the Committee might have.

OFFICE OF COMMUNICATIONS PREPARED STATEMENT OF ALI WEBB, DIRECTOR OF COMMUNICATIONS

Mr. Chairman and members of the Subcommittee, I am pleased to discuss the fiscal year 1997 request for the Department of Agriculture's Office of Communications.

The Office of Communications carries out the mission described in the organic act establishing the Department of Agriculture in 1862: "To acquire and to diffuse among people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word."

The Office of Communications provides leadership and coordination, along with expertise and counsel, for the development of communications strategies which are vital to the overall formulation, awareness, and acceptance of USDA's programs and policies. The Office of Communications serves as the principal USDA contact point for dissemination of accurate and timely information through the INTERNET, fax-on-demand service, news media and constituent briefings, and other standard means.

We have streamlined the activities of the Office of Communications through a restructuring and reduction in the number of staff years. To coordinate the communications of the Department's 7 program mission areas, 16 program agencies, and various staff offices, the Office of Communications is budgeted for 134 staff years in fiscal year 1997, which is 16 staff years less than fiscal year 1993. The central staff is all located in headquarters in Washington, D.C.

In order to respond quickly and efficiently to requests for information with a much smaller communications staff, the Office of Communications uses the most current information technology. From use of the World Wide Web on the INTERNET -- the information superhighway -- to radio, television and teleconferencing facilities, thousands of people are reached daily with the latest information about USDA programs affecting those who farm as well as those who eat food, wear clothes, live in houses, and visit rural areas and national forests.

Fiscal Year 1997 Budget Request

The Office of Communications is requesting a budget of \$8,317,000. This is an increase of \$122,000 over our fiscal year 1996 current estimate. This modest increase covers the costs of the current staff on board and is comprised of an increase of \$179,000 for pay costs, which is offset by a decrease of \$57,000 in support of the Administration's streamlining efforts to reduce overhead-type costs.

This concludes my statement, Mr. Chairman. I will be pleased to respond to any questions.

OFFICE OF THE GENERAL COUNSEL

PREPARED STATEMENT OF JAMES S. GILLILAND, GENERAL COUNSEL

INTRODUCTION

Mr. Chairman and members of the Subcommittee, I am pleased to have this opportunity to provide you with an overview of the Office of the General Counsel and present our appropriation request for fiscal year 1997.

MISSION OF THE AGENCY

The Office of the General Counsel (OGC) provides legal advice and services to the Secretary of Agriculture and other officials of the Department of Agriculture with respect to all USDA programs and activities.

The mission of OGC is to determine legal policy, provide legal services, and direct the performance of all legal work for the Department throughout its Washington and field locations. The General Counsel is the legal advisor to the Secretary of Agriculture and is responsible for providing all legal advice and representation that is required for the Department.

SIZE

As a result of the staff reductions achieved during fiscal year 1995, end of year total employment was 361 of which 351 were permanent full-time employees. There were 163 permanent full-time employees and 4 other employees located in Washington, D.C., and 188 permanent full-time employees and 6 other employees in the field.

REORGANIZATION OF OGC

As we entered last year, our resources were already under stress. Funding had remained essentially flat while our costs and our work, particularly in the natural resources area, had increased. We knew that we had to operate with a reduced staff. The challenge would be to reduce staffing while maintaining high quality services with even greater work. With early projections showing a deficit, we undertook an in-depth self-analysis to address current problems and how to achieve our long-term goals. Four reporting groups were commissioned to perform a fundamental assessment of our offices. These groups identified the main issues and suggested several options.

These options were reviewed, analyzed, and reviewed again. We then developed plans and options that would result in a

sustainable future for this office. Some were complex, some were simple. The results were to be fewer people in fewer places, but better trained and supported people, working more in specialties. To achieve our goals, we had to make up in the quality and efficiency of our legal services what we could not provide in the quantity of our staff and in geographical convenience to our clients. By eliminating, realigning or consolidating offices both in Washington and the field offices, OGC would, we felt, be in a better position to manage the resources Congress provides us and continue to provide the best possible legal services to the Secretary. We have attached an organizational chart to reflect the new structure, which was approved by the Secretary of Agriculture in February 1996.

This reorganization affected both Washington and the field. In Washington, we realigned responsibilities and restructured some reporting relationships. In the field, we consolidated our field office structure into better supported offices in fewer places.

Prior to the approval of OGC's reorganization, OGC's services were provided through 11 Divisions in Washington, 22 field offices, 7 client host sites, and 1 special work site. We will send the Committee a chart that shows the previous structure of the office.

The headquarters for OGC is located in Washington, D.C. The Office is directed by a General Counsel, a Deputy General Counsel, five Associate General Counsel, 11 Assistant General Counsel, and a Director for Administration and Resource Management.

The reorganization of our headquarters legal staff has been completed. The staff is now divided into these five functional areas: (1) Natural Resources; (2) Rural Development; (3) International Affairs, Commodity Programs and Food Assistance Programs; (4) Regulatory and Marketing; and (5) Legislation, Litigation and General Law.

The reorganization of our field offices has begun and will be completed this fiscal year. As previously stated, we are consolidating our smallest offices or host sites to concentrate a smaller staff into better supported offices in fewer places. Our offices will be fewer but each will handle a broader range of work. We are also reorganizing our responsibilities to do more work in teams with specialized subject matter expertise.

Based on the previous structure, OGC had five regional offices, each headed by a Regional Attorney, and 17 branch offices. Currently, OGC has 8 employees working in the offices of client agencies, U.S. Attorneys, or in other locations. These sites include Sacramento, California; Trenton, New Jersey; St. Paul, Minnesota; Stevens Point, Wisconsin; Gainesville, Florida; Indianapolis, Indiana; Boise, Idaho; and Greenwood, Mississippi.

Much of the Department's caseload is handled at the field level directly with U.S. Attorneys. Primarily, legal services in the field focus on the lending and agricultural areas. We have also experienced exponential growth in natural resources litigation. Other Departmental agencies, including the Agricultural Marketing Service and the Food and Consumer Service, also receive substantial legal services from OGC field offices.

We have been reminded again that change is always difficult, but not changing was not an option. With these changes, OGC will, we believe, be the sustainable law firm we all want it to be and a rewarding place to practice our profession.

CURRENT ACTIVITIES AND ISSUES

The Subcommittee may be interested in an update on the current activities and current issues we face. Much of OGC's workload is on-going in the sense that we continue to serve on a daily basis the legal needs of numerous agencies of USDA. We do all legal work (except counseling the Inspector General on criminal matters), which includes reviewing and explaining regulations, dealing with the infinite universe of issues in our

litigated cases--we have over 20,000 active cases now-- prosecuting administrative cases, handling lending matters of all sorts, providing both formal and informal advice, and drafting proposed legislation. While the names and issues change, the basic legal services we provide remain essentially the same. However, there are more of them. Let me highlight a few areas.

A number of issues and concerns have commanded our attention and legal resources this year and will continue to do so. These are days of change. The reorganization of the Department has required a great deal of legal attention focussed on work to the Department, as agencies change the way they do business. We have also spent a great deal of time on collection cases and timber defaults which go back to the last decade. And, of course, we have our continued involvement in extremely complex wildlife and forestry issues which first impacted the Pacific Northwest and now affect the entire National Forest System and which have consumed a major portion of my time. Much of our legal resources have been devoted to defending ongoing Forest Service programs in timber, grazing, and recreation.

We have expended considerable resources in reviewing and drafting legislative proposals for inclusion in the new Farm Bill. These proposals cover a myriad of conservation, commodity credit, and trade issues. Our task, after it is enacted, is to analyze what the program is, what is technically correct or what clarifications are needed, what is left for Secretarial discretion and what policies or Regulations must be developed, and who we have to educate about all of it. When these are developed, we help advise and inform the agencies and address actual issues that might arise with a new national program.

We have continued to provide legal services in the international area as the United States adapts to the post-Uruguay Round and post-North America Free Trade Agreement (NAFTA) world of increasing trade liberalization. Implementation of these two agreements has meant, for example, that OGC has been

called upon to advise the Foreign Agricultural Service (FAS) with respect to the restructuring of the cheese import program to meet the World Trade Organization-General Agreement on Tariffs and Trade (WTO-GATT) obligations, as well as to provide legal advice with respect to the formulation of regulations for several new CCC export credit activities, specifically Facilities Financing Guarantees and Supplier Credit Guarantees.

In addition, the United States has been engaged in a determined effort to ensure that commitments and concessions obtained under these agreements are honored by our trading partners. OGC has been actively engaged in consultations and dispute resolution with respect to the U.S. WTO challenges to Korea's shelf-life regulations and inspection measures; the WTO challenge to the European ban on imports of beef produced with the use of growth promotant hormones; and the NAFTA challenge to the tariff-rate quotas imposed by Canada on imports of poultry and dairy products. OGC has also continued to advise FAS during its ongoing negotiations with the European Union (EU) over the EU's implementation of its Margin of Preference commitment with respect to the importation of grain and rice from the United States.

OGC has also been called upon to advise FAS and other agencies within the Department in connection with negotiations that have resulted from the new rules and obligations imposed by virtue of the WTO Agreement on Sanitary and Phytosanitary Measures. OGC has provided support to FAS, the Food Safety and Inspection Service (FSIS) and the Animal and Plant Health Inspection Service (APHIS) during the course of the U.S.-E.U. negotiation of a framework text on Equivalency with respect to measures affecting trade in live animals and animal products, and has advised APHIS in its negotiation with the EU concerning mutual recognition of inspection and safety measures with respect to trade in veterinary pharmaceutical and biologics.

OGC attorneys are substantively involved in providing legal services related to the continuing changes in the Department's crop insurance program initiated by the substantial expansion required by the Crop Insurance Reform Act; nonprocurement suspension and debarment issues; and the protection of the public interest in regards to food stamp fraud and the development of the Department's plans for the extension of Food Stamp Program electronic benefit transfer systems.

OGC attorneys continue to be substantially involved in providing legal services related to nonprocurement debarment and suspension of dairy operations convicted of bidrigging in the National School Lunch Program and the protection of the public interest with respect to food stamp fraud, including enhanced review of retailer qualifications and the development and implementation of the Department's plans for extension of Food Stamp Program electronic benefit transfer systems.

In the trade practices area, we have filed a trade practices enforcement case against the country's largest meat packer alleging that the packer has given an undue or unreasonable preference to certain feedlots and has subjected other feedlots to an undue or unreasonable prejudice or disadvantage. That case is scheduled for hearing in September. We have provided assistance and counsel to the Secretary regarding the establishment and implementation of the Advisory Committee on Concentration in Agriculture. We continue to provide legal advice to both Agricultural Marketing Service (AMS) and Grain Inspection, Packers and Stockyards Administration (GIPSA) with regard to investigation of allegations of unfair or deceptive trade practices, and we are working with the Perishable Agricultural Commodities Branch of AMS to amend their regulations in light of the Perishable Agricultural Commodities Act Amendments of 1995.

In the food safety area, we have provided legal assistance to FSIS on the many issues related to the Pathogen

Reduction/Hazard Analysis Critical Control Points rulemaking proceeding. We participated with FSIS staff in an extensive series of public meetings, that included six issue-focused public meetings on the key segments of the proposal as well as the Secretary's food safety forum. We are also providing legal support to FSIS as they work on the development and implementation of an array of regulatory initiatives to reform the current meat and poultry regulations. These initiatives are designed to make the current regulations more compatible with HACCP, eliminate redundant and obsolete regulations, allow more productive use of resources, and make regulations less burdensome and easier to follow. Additionally, in the past year, we resolved the protracted litigation over the regulation of mechanically separated meat and poultry and finalized the rulemaking on this matter.

We have worked with the APHIS on the rulemaking dealing with the request by Mexico to permit the importation of fresh Hass avocados into 13 northeastern states. We participated in all seven public hearings on this issue, and have advised APHIS as they evaluate the public comments submitted on this proposal. We have also worked with APHIS on the development of a proposed rule to implement a new regulatory approach, consistent with our GATT and NAFTA obligations, to the importation of animals and animal products into the United States. This rulemaking will propose that the disease risk criteria used for import regulations be developed on a regional basis rather than on a country by country basis. This proposal will involve substantial revision of the current import regulations.

There have been major developments in connection with litigation challenging generic advertising programs under both marketing orders and free-standing legislation. Most significantly, the Solicitor General has filed for Supreme Court review of the Ninth Circuit's decision holding the advertising program under the California peach and nectarine marketing orders

unconstitutional on First Amendment grounds. In another important case, Goetz v. Glickman, a Kansas District Judge rejected a First Amendment challenge to the beef advertising program. Our office also provided legal assistance in connection with major rulemakings involving tart cherries and spearmint oil, and in implementing the sheep and wool research and promotion program. In the area of animal welfare, we obtained an order revoking the license of a dog dealer suspected of selling stolen dogs to research facilities, and we initiated an action against a well-known primate research center for cage size and animal care violations. We also provided legal services in connection with an ongoing negotiated rulemaking proceeding involving humane standards of care for marine mammals, and in connection with a series of "town meetings" to develop information for more effective regulation of "puppy mills."

We provide legal services to agencies which manage some of America's largest lending portfolios. Overall, USDA extends credit of nearly \$24 billion through its various housing programs. We oversee such legal work with a far smaller staff than a comparable private organization would use. OGC continues to expend resources in completing foreclosure workload and debt collection post Coleman. Given the continued substantial workload of U.S. Attorney offices, a significant amount of OGC's workload involves the litigation of foreclosure actions.

The Secretary is committed to regulatory reform. We continue to work with Department officials to implement the President's regulatory reform program. This promises to be a significant undertaking as we work with agencies throughout USDA to reduce regulatory burden, eliminate obsolete or unnecessary regulatory requirements, and streamline regulation, particularly in the areas of rural farm and utility lending.

We have been required to devote considerable fresh resources to the Rural Utilities Service and its electric borrowers as they experience the effects of and respond to the rapid deregulatory

changes in the electric industry. We are working closely with RUS and DOJ on the involved and time-consuming problems of several borrowers, including several bankruptcies and financial workouts that have raised complex new issues of law and policy.

A number of issues and concerns have arisen in the RUS program with the passage of the Telecommunications Act of 1996. The Act is revolutionizing the transmission of information in the United States as it eliminates barriers to market entry and spreads competition in the telephone and cable TV industries. The Act encourages universal service but the RUS, charged with financing telecommunications services throughout rural America, faces new questions of loan purposes and assuring loan repayment.

In the natural resources area, we have been involved in a number of extremely significant undertakings concerning national forest management and soil conservation programs. We have provided assistance in twenty states to the Natural Resources Conservation Service under the Wetlands Reserve Program through the acquisition of voluntary wetland easements. Management of our public lands is a subject of intense debate and litigation, with a great deal of legal work generated by the impact of new scientific information on ongoing Forest Service projects and commitments. Such legal challenges involve the President's Northwest Forest Plan, the Mexican Spotted Owl litigation in the Southwest, and fisheries protection in the intermountain West.

Further, we are defending numerous suits under the timber salvage section of the Rescissions Act and challenges by local governments and individuals under the "County Supremacy" movement disputing federal jurisdiction to regulate and protect public lands. We must also devote our attention to these issues and the need for legal assistance in the preparation of regulations and policies updating and implementing the Department's diverse natural resource programs.

We have also devoted substantial resources to other legislative and regulatory initiatives, such as mining law

reform, grazing reform, reauthorization of the Safe Drinking Water Act and of the Comprehensive Environmental Response, Compensation, and Liability Act. In addition, we regularly provide advice on compliance and litigation arising under the pollution control laws. Most frequently, these issues involve abandoned and inactive mines on federal lands and the use of storage of agricultural chemicals.

In the general law area, we have expended considerable effort in assisting the new National Appeals Division (NAD), created pursuant to the Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994. We assisted in drafting and implementing NAD procedural rules. We also reorganized the way in which we render legal services to program appeals in order to provide independent advice to NAD, while at the same time providing legal advice to USDA agencies whose decisions are appealable to NAD. OGC attorneys have worked with Department civil rights professionals on a comprehensive revision of Department regulations and procedures on compliance and complaint processing in Department conducted programs.

Also with regard to the 1994 Reorganization Act, we have drafted proposed regulations in the Federal Register to effectuate the reorganization.

In the procurement area, we have devoted attention to assisting Department agencies in implementing the many changes in Government procurement resulting from the Federal Acquisition Streamlining Act of 1994. We anticipate similar efforts will be required to assist in implementing the reforms made by the Acquisition Reform Act of 1996, especially the reforms related to the acquisition of Federal Information Resources and protest procedures.

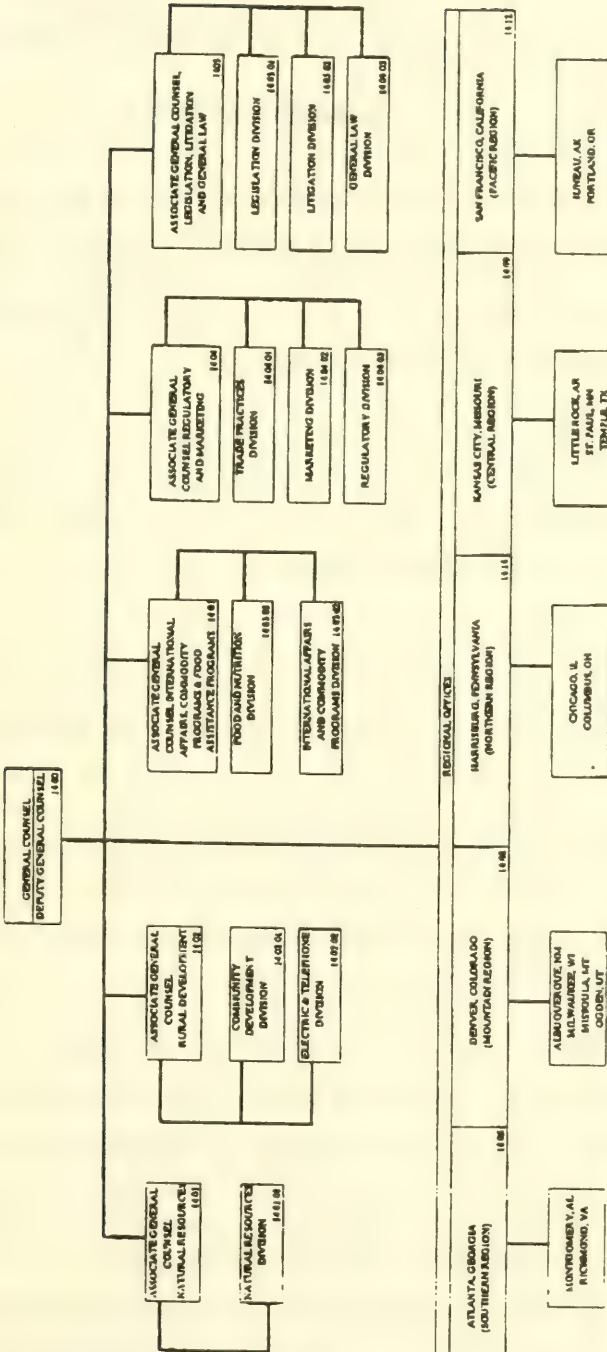
All these comments hardly touch upon the dozens of daily issues that come before a Department of over 100,000 employees administering programs for numerous agencies.

FY 1997 BUDGET REQUEST

For fiscal year 1997, OGC is requesting \$29,249,000 in direct appropriations. This request represents a net increase of \$1,390,000 over the fiscal year 1996 appropriation. Of this amount, \$190,000 will be used to support salary adjustments, \$75,000 will be for non-salary costs, \$443,000 is for pay cost increase and \$792,000 is to maintain the staff years that the Department requires to assure basic legal services. Because our budget consists primarily of funds for personnel compensation, we have had little way to absorb personnel cost increases. We undertook two buyouts and brought our staff below the numbers necessary to provide the required legal services to the Secretary and USDA agencies. This increase would provide OGC the opportunity to backfill some losses in skill areas that we and the Department feel are necessary for achievement of our mission. Even with this modest backfilling effort, we will be a streamlined organization with a staff level reduced from the FY 1995 levels. These increases are offset by a \$110,000 reduction for administrative efficiency, in keeping with the President's Executive Order to promote the efficient use of resources. Therefore, I submit to you that the entire amount of our budget request is essential to execute our plan and maintain the progress made through implementation of the reorganization.

CLOSING

That concludes my statement, Mr. Chairman. We appreciate the support this Subcommittee has given us in the past. Thank you.



THE VISION OF THE OFFICE OF THE GENERAL COUNSEL IS TO DETERMINE LEGAL POLICY AND DIRECT THE IMPLEMENTATION OF ALL LEGAL WORK BY THE DEPARTMENT.

SUPPRESSED: 11 MARCH 1982

OFFICE OF INSPECTOR GENERAL
PREPARED STATEMENT OF ROGER C. VIADERO, INSPECTOR GENERAL

INTRODUCTION AND OVERVIEW

Good afternoon, Mr. Chairman and members of the Committee. I am pleased to have this opportunity to visit with you today to discuss the activities of the Office of Inspector General (OIG) and to provide you with information on our audits and investigations of some of the major programs and operations of the U.S. Department of Agriculture (USDA).

Before I begin, I would like to introduce the members of my staff who are here with me today. James Ebbitt, Assistant Inspector General for Audit; Craig Beauchamp, Assistant Inspector General for Investigations; and Del Thornsburg, Director of our Resources Management Division.

OIG's mission is to perform audits and investigations of the Department's more than 300 programs and operations, recommend policies and actions to promote economy and efficiency, and prevent and detect fraud, waste, and mismanagement in these programs and operations. We keep you and the Secretary informed about problems and deficiencies relating to the administration of the Department's programs and operations and report criminal violations to the U.S. Attorney General. We have a diverse staff of auditors, criminal investigators, and other personnel in offices throughout the country to carry out these activities.

Last year, I promised you that we would work closely with you. We have tried to do this, and I hope that we have been able to address some of your concerns. I want to thank the Committee for supporting my major law enforcement initiative regarding forfeiture of assets involved in certain felony violations of the Department's programs. With the Committee's support, we are now authorized to receive proceeds from forfeiture actions arising from investigations. This will enhance our ability to combat fraud by turning forfeiture proceeds into resources supporting our law enforcement mission. We

are working with the Departments of Treasury and Justice (DOJ) to finalize the operational procedures for this authority.

During the year, we continued to work closely with agency officials to address key issues and to expand our cooperation with other Federal, State, and local law enforcement agencies to broaden the impact of our work. Our achievements would not be possible without the actions of the Department's program managers who have worked closely with us in carrying out our mission. Working together, our staffs identified program weaknesses and program violators. Capitalizing on the staffs' respective expertise, we created solutions for positive action.

I am proud to say that in fiscal year (FY) 1995, we continued to more than pay our own way. We produced 328 audit reports and obtained management's agreement on 1,548 recommendations. Management also agreed, as a result of our audit work, to recover \$22.6 million and put \$414.5 million to better use. Additionally, we completed 974 investigations and obtained 859 convictions. Investigations also resulted in \$41.2 million in fines, restitutions, and other recoveries and penalties during the year.

For several years we have been required to absorb increases in personnel costs, which has forced us to limit our replacement hiring and has extensively limited the funding we have available for other items such as travel, specialized law enforcement equipment, and supplies. As I indicated to this Committee last year, the limited hiring we have been able to do has been primarily to replace field auditors and agents. As part of our streamlining efforts, we have restructured our agency to greatly reduce the number of supervisors in order to put more auditors and agents in the field on direct operations. We have reorganized our headquarters operations and eliminated two divisions and related management positions in order to operate more efficiently. We are reviewing our field organizational structure to determine if it is the most effectively organized. Where feasible, a limited number of offices may be closed as a result of this review and pending available funds to relocate staff to the most needed locations.

Still, our auditors and investigators can continue to recover and save money for the taxpayers only if they have the tools needed to perform their duties. While I recognize that these are difficult budget times and every agency must do more with less, I believe that what I like to call the agency's "four m's"--manpower, materials, machinery, and money--are being stretched to the limit. I believe the agency cannot continue to provide sufficient service and assistance to you, the Congress, and to USDA agencies without being provided adequate resources, and I request that our proposed funding level be approved. I believe that resources allocated to the agency are cost-effective in view of the money we save for the taxpayers.

I also have an additional concern of which I would like to advise the Committee relating to our authority. Our statutory responsibilities require that we audit USDA grant programs and the use of grant monies by recipients. Our findings in such audits have resulted in vast savings and improvements by revealing fraud, waste and abuse in USDA programs and operations. Our ability to conduct such audits, however, is being challenged.

In this regard, we are conducting an audit of USDA's Agricultural Loan Mediation Program. The program provides grants to operate State and local mediation programs. The focus of our review, in part, is to determine whether USDA grant monies are being properly expended and to evaluate the merits of USDA's Agricultural Loan Mediation Program. In order to complete this evaluation, we must review certain records maintained by selected mediation programs. Access to such records is being denied by one such mediation program, however, because of confidentiality concerns. We are, therefore, being prohibited from evaluating this USDA program and related expenditures of Federal funds. This result is clearly inconsistent with our statutory mandate to evaluate the economy and efficiency of USDA programs and could severely limit our ability to carry out our statutory mission if allowed to prevail. We plan to vigorously oppose this effort and would ask the Committee's support, if needed. We will keep the Committee advised on this issue.

Mr. Chairman, at this time, I would like to highlight some of our audit and investigation activities.

AUDIT AND INVESTIGATION ACTIVITIES

ENTITLEMENT PROGRAMS

FOOD AND CONSUMER SERVICES (FCS)

Food Stamp Program (FSP)

The food stamp program represents almost 44 percent of the Department's budget. This year approximately \$27 billion will be available for issuance in food stamps. This is the largest program activity in the Department and, due to the ease with which food stamps may be illegally exchanged or used as a second currency, it is the program most vulnerable to fraud, waste, and abuse. With about 1 in 10 Americans and over 200,000 retail stores participating in the Program, OIG must continue to channel substantial resources to FSP fraud prevention and detection efforts.

During FY 1995, we devoted approximately 45 percent of our investigative resources and 10 percent of our audit resources to FSP. We completed and issued 641 reports of investigation and 13 audit reports. The results of our work included 760 indictments, 677 convictions, and \$9.8 million in fines, restitutions, recoveries, and other monetary penalties. Following are some examples of our audits and investigations.

Emergency Program

In my statement last year I said that one of our initiatives was to be in a state of readiness to assist agencies when disasters strike. To this end, we recently assisted FCS in Idaho, Oregon, and Washington as a result of severe storms and flooding to monitor the emergency FSP operations. Teams of auditors and FCS personnel were on-site at those areas severely impacted and

determined that the three States and FCS were well prepared, in control of the situation, and the program operated well. We also assisted FCS in monitoring emergency FSP operations in Texas and the Virgin Islands. A team approach to monitoring the program was utilized. We observed and verified that established controls were effective in minimizing the risk of program abuse.

Ineligible and Questionable Stores Authorized to Accept Food Stamps

Because of continuing reports about the legitimacy of some stores participating in FSP, we conducted a nationwide sweep of authorized food stores to assess whether they met FCS' eligibility criteria. During May and June 1995, we visited 5,162 authorized stores in 7 metropolitan areas. We found that 857 of the stores visited were clearly not eligible to participate in FSP because they had no staple foods, had minimal quantities of staple food items, were out of business, did not exist, or had more than one assigned authorization number. We questioned the eligibility of another 450 stores because they had limited inventories of staple food items or because their inventories did not support their food stamp redemptions. At the time of our work, FCS did not require preauthorization visits to applicants' stores or periodic visits to stores already authorized.

We recommended FCS withdraw authorizations from the obviously ineligible stores and incorporate routine preauthorization visits into its procedures. We also recommended that FCS schedule visits to other high-risk stores. FCS acted to withdraw authorizations and has completed on-site visits, with OIG participation, in Los Angeles and New Orleans. Just recently, we completed followup visits to those cities we visited in May and June 1995 to look at stores authorized, or reauthorized, between September 1, 1995, and November 30, 1995, to assess the effectiveness of FCS' policy on authorizing and reauthorizing food stores. We are now assessing the results and have noted improvements but more are necessary.

Operation Checkout

In response to the commitment of the Administration and the Department to ensure that food stamps get to the people who really need them, OIG initiated "Operation Checkout," an intensified effort to improve the integrity of FSP. This operation brought to fruition 288 court actions (indictments, arrests, or convictions) during the period August 1 through October 31, 1995, related to investigations which identified over \$22 million in FSP fraud.

Electronic Benefits Transfer (EBT)

The EBT system was developed to provide food stamp benefits electronically as an alternative to paper coupons. We believe that EBT will help reduce trafficking by recipients as well as make trafficking by retailers easier to detect and investigate. The EBT system contains important data about transactions which we have used in several major investigations. This data includes details of each EBT transaction which can be used to detect fraud and identify patterns of fraudulent activity. Additionally, with EBT data, we have the ability to identify and provide the State with the identity of the recipient whose food stamp benefits were trafficked. Following are some examples.

- The owner of B&S Meat Sales and seven employees were convicted in State court in Texas following a month long investigation into food stamp fraud. B&S Meat Sales was authorized as a mobile meat vendor and operated from an apartment in southwest Houston. Employees driving vehicles equipped with coolers sold meat and purchased food stamp benefits throughout the Houston area. Food stamp benefits were also purchased by the owner inside the apartment. Following several undercover transactions involving both food stamps and EBT benefits, a State search warrant was served on the apartment and the individuals involved in the trafficking were arrested. This part of the investigation was conducted jointly with the Texas Department of Human Services OIG and the Houston Police Department. From January 1993 to March 1996, B&S Meat Sales and Fox Meat, a business operated jointly with B&S

Meat Sales, redeemed over \$2.4 million in food stamp benefits. Our ongoing financial investigation has uncovered approximately \$340,000 in inventory available for sale by the two stores during that time frame.

- An investigation of a small retail grocery store in Baltimore, Maryland, led to the filing of Federal charges against the store owner and State charges against her father, husband, and 10 recipients for trafficking in EBT food benefits. The owner of the store pled guilty to trafficking in more than \$250,000 of EBT benefits in 1994 and 1995. She was sentenced to serve 10 months' in jail. Her father and husband pled guilty in Maryland State court. Based on the EBT computer data and other evidence, 10 recipients who routinely sold their food benefits at the store were indicted and are awaiting trial in State court.

- The owner of another small grocery store in Baltimore, Maryland, and two family members pled guilty to Federal charges of trafficking in EBT benefits. Over a 14-month period, the family bought more than \$500,000 worth of EBT benefits from recipients at a rate of 60 cents on the dollar. They used this illegal profit to buy new cars, jewelry, and other goods. The family agreed to forfeit all of the items identified during the investigation as having been bought with illegal proceeds. The owner of the store, his brother, and their mother received Federal prison sentences of 12 months' for each brother and 18 months' for the mother.

EBT Concerns Need To Be Addressed Now

At least 12 Federal and State benefit programs could use EBT to replace paper delivery methods. These include USDA's FSP, the U.S. Department of Health and Human Service's Aid to Families With Dependent Children Program, and the Social Security Administration's Social Security and Supplemental Security Income Programs. The Federal EBT Task Force designed a plan to achieve rapid implementation nationwide of EBT by early 1999. At the request of the President's Council on Integrity and Efficiency, we consolidated concerns of

the Inspector General community regarding the implementation of EBT so that these concerns could be addressed by the task force.

Cross-program issues which the task force will need to address include making program record retention requirements consistent with criminal statute of limitation provisions, making EBT processor records accessible to Government auditors and investigators, and increasing security measures related to the EBT card such as limiting the number of unsuccessful attempts to access benefits. FSP issues which FCS will need to address include dealing with the large numbers of potential trafficking cases that EBT systems are now capable of identifying, influencing State lawmakers to define trafficking in EBT benefits as a criminal activity, and ensuring that reconciliations are made between letter-of-credit drawdowns and the reported EBT transactions.

The task force has begun to address the recommendations and issues.

EBT Risk Management Advisory Forum

In our role as a member of the EBT Risk Management Advisory Forum, an advisory group of the Federal EBT Task Force, we were instrumental in ensuring that higher security specifications (hologram, four-color, fine line printing, ultra-violet ink, embossing the name, and an expiration date), were required for EBT cards issued for Federal direct benefits (Social Security, Veterans Administration, etc.) in the Southern Alliance of States, a consortium of States implementing a regional EBT system. These security specifications were to minimize the risk of loss to the Federal Government. This requirement, however, does not presently extend to State-delivered Federal benefit programs such as food stamps and Aid for Families with Dependent Children. We are continuing to work with FCS to incorporate these specifications in all benefit cards used to issue State-administered benefits.

Other Food Stamp Trafficking

- Two Canton, Ohio, grocers and a corporation were sentenced for their roles in trafficking and illegally redeeming approximately \$2 million in food stamps during a 54-month period. The grocery store manager, convicted of food stamp trafficking and laundering the proceeds, was sentenced to 57 months in prison, \$500,000 restitution, and a fine of \$50,000. The vice-president of the corporation, guilty of food stamp trafficking, was sentenced to 27 months imprisonment plus 300 hours community service. The corporation was fined \$500,000 for its part in the fraud and laundering of the proceeds.

The owner, who remains a fugitive, had previously been disqualified from the food stamp program based on food stamp trafficking at another store he owned. He concealed his ownership of the Canton grocery store through a "paper" transfer to the corporation. The store manager then took approximately \$1.5 million in food stamps to two unrelated stores for redemption, in order to conceal the amount of stamps going through their store. This case was worked jointly with IRS' Criminal Investigation Division, the Ohio Department of Liquor Control, and the Canton Police Department.

- The two owners of a restaurant supply business in New York City were convicted of defrauding FSP of \$3.5 million. They did so through two different trafficking schemes over a 3-year period. For part of the period, the two laundered \$1.8 million in illegally acquired food stamps through a large Brooklyn food wholesaler. After the wholesaler was convicted of food stamp fraud and closed for business, the two obtained an authorization for their supply business to participate in FSP. The supply business then illegally redeemed an additional \$1.7 million in food stamps. The principal owner was sentenced to 18 months' in prison and ordered to pay \$750,000 in restitution. The second owner was sentenced to 6 months' home detention and ordered to pay \$350,000 in restitution.

During the investigation, it was also discovered that the supply business transferred about \$16 million to banks in Hong Kong during a 9-month period. This investigation was conducted jointly with the Internal Revenue Service.

- The owner of a New York City grocery store was convicted of food stamp trafficking, conspiracy, and money laundering in connection with \$11.7 million in food stamps he redeemed illegally over an 18-month period. The individual conspired with two other grocery store owners, securing powers of attorney to control the other two stores' bank accounts. This allowed the individual to redeem a larger volume of food stamps than could be traced to him and to issue checks without having the transactions appear on his financial ledgers. The individual then bought food stamps by check from delivery truck drivers, who obtained the stamps from unauthorized stores as payment for merchandise delivered. The truck drivers used the checks to pay the wholesalers for the merchandise, so the transactions appeared legitimate on paper. One of the store owners and two truck drivers cooperated with OIG and testified against the principal trafficker. He was found guilty at trial, and his personal and business accounts were seized. He was sentenced to 2-1/2 years in Federal prison, fined \$6,400, and ordered to pay restitution of \$340,000. Although the wholesalers who exchanged merchandise for the checks from the truck drivers did not profit from the scheme, they were aware of the wrongdoing. Two have entered into civil settlements totaling \$50,000.

"Rolling" Stores Are a High Risk for Food Stamp Trafficking

"Rolling" stores are converted trucks, vans, and buses that travel from place to place selling a variety of merchandise and some of these are authorized to accept food stamps. We evaluated FCS' oversight of "rolling" stores in the Southeast where 655 such authorized stores operate. We reviewed the activities of 48 "rolling" stores operating in the Georgia and South Carolina areas which redeemed over \$8 million in food stamps during 1993 and 1994. Almost half of the stores either could not verify the amount of food stamps they redeemed or were ineligible to participate because their sales did not consist primarily of eligible food items. For the 2 years reviewed, these

questionable stores redeemed over \$6.9 million in food stamps. In addition, many of the questionable stores operated in metropolitan areas where there was little need for mobile stores because of general access to food stores and public transportation. We recommended that FCS officials evaluate the need to authorize "rolling stores" in metropolitan areas, establish claims against the cited stores, evaluate the sales activities of "rolling" stores appearing on high redeemer reports, and inspect the food stocks of "rolling" stores. FCS officials agreed and have begun to take corrective actions.

Six Sentenced for \$2.7 Million Trafficking Scheme Through "Rolling Store"

In Atlanta, Georgia, a father and son, who were involved in a "rolling store" retail grocery operation, were each sentenced to serve 35 months in prison and ordered to pay \$750,000 in restitution for their participation in a conspiracy to illegally purchase \$2.7 million in food stamps. Four other individuals involved in the conspiracy received sentences ranging from 3 months' probation to 21 months' in prison. They were also required to pay a total of \$150,000 in restitution. After the completion of this investigation, FCS disqualified all "rolling stores" in the Atlanta area from participation in FSP.

Child and Adult Care Food Program (CACFP)

We reviewed 38 of 285 CACFP sponsors in 5 States and 300 of their 54,000 day care homes. During the 6-month period included in our review, the five States spent \$122 million in program funds for meals. We statistically estimated for the 5 States that 3,700 day care homes claimed meals totaling \$6 million for absent or nonexistent children; 22,000 day care homes did not maintain current records of meals served resulting in unsupported meal claims for over \$2.5 million; 160 sponsors did not perform all required monitoring visits to day care homes; and 201 sponsors did not require day care home providers to attend program and child care training. Management controls over program operations were not properly designed to prevent or detect inflated or unsupported meal claims.

We recommended that monitoring visits to day care homes be unannounced and that routine parents' contacts be made. Other recommendations included FCS establishing minimum review coverage for both State agencies and sponsors, seeking alternatives to the practice of paying sponsors based on the number of day care homes enrolled, and targeting its reviews to assess the effectiveness of State and sponsor monitoring. FCS agreed to the recommendations.

Donated Commodities Diverted

Three former officials of a food manufacturing and processing plant pled guilty in Los Angeles, California, to charges that they defrauded NSLP by diverting donated commodities to other uses. The company received USDA-donated commodities to make burritos for school lunches served under NSLP, but our investigation disclosed that the company used some of the commodities illegally to prepare products for commercial sale. The investigation also disclosed that the company used products that did not meet the quality specified in the Government contract and, on several occasions, used adulterated meat to manufacture Mexican food products. As a result of these actions, the company defrauded the Government out of \$1.4 million. The former plant president was sentenced to 2-1/4 years in prison, to be followed by 5 years of supervised release, and ordered to pay \$10,000 in restitution; the vice president received 1 year in prison, to be followed by 3 years of supervised release, and ordered to pay \$2,000 in restitution; and the third official was sentenced either to 6 months in home detention or a community correctional facility and ordered to pay \$3,200 in restitution.

CONSUMER PROTECTION

FOOD SAFETY INSPECTION SERVICE (FSIS)

Planned Changes to the Meat and Poultry Inspection Program Need to Be Implemented

We evaluated FSIS' Meat and Poultry Inspection program, following up on the status of corrective action on prior audit recommendations to identify areas

that may warrant further review. As a result, we are planning further reviews of plant operations, computer systems, new labeling requirements, and efforts to trace microbial diseases back to specific producers.

Our evaluation also identified three areas needing improvement. Because of FSIS' centralized upper management and its changes in personnel, many recommendations made from 1986 to the present by OIG, the General Accounting Office (GAO), and the National Academy of Sciences have not been implemented. FSIS is committed to complying with the recommendations, but long-term solutions have not survived from administrator to administrator. The current grant of inspection, which sets out the inspection process between FSIS and the plant, does not require certification that the plant is conforming with laws and regulations, and it does not contain penalties for violations. Without an efficient means of dealing with recalcitrant plants, FSIS has had to establish lengthy and costly administrative procedures to ensure that plants comply. An estimated 6.5 million people suffer annually from foodborne illnesses. Properly educated, the public can reduce the risk of foodborne illness by correctly handling, cooking, and storing meat and poultry. We believe FSIS can do more to inform consumers of these precautions.

We recommended that FSIS (1) delegate authority to ensure completion of long-range plans, (2) implement corrective action for those audit recommendations for which action has not been completed, (3) revise its grant of inspection to function like a contract, and (4) pursue mass consumer education efforts. FSIS agreed with our recommendations and specified actions it will take.

Violations of the Federal Meat Inspection Act

- A South Dakota mail-order specialty meat company and three officers-- a father, son, and daughter-in-law--were convicted for misbranding under the Federal Meat Inspection Act, conspiracy, wire fraud, and mail fraud following a 3-week trial. Our investigation found that over a 5-year period, the defendants, acting in a conspiracy and with intent to defraud, sold nearly 2 million pounds of misbranded meat food product.

The company advertised and solicited orders from customers throughout the country and represented that the meat product was raised and selectively bred to produce genetically lean, consistently superior quality beef free of additives, substitutes, antibiotics, or implant hormones to enhance growth which was untrue. The health benefits of the product were advertised in national magazines throughout the country. Sentencing is tentatively scheduled for May 1996.

FARM PROGRAMS

FARM SERVICE AGENCY (FSA)

Disaster Assistance

Nonprogram Crops

Our audits have continued to identify significant producer fraud and abuse in the 1993 ad hoc disaster assistance programs. We completed 35 audits of the 1993 ad hoc disaster assistance programs authorized in 20 States and recommended the recovery of over \$16 million in excessive payments. These excessive payments were due to false certifications by producers for such items as gross income, information for payment limitation determinations, actual production, type of farming practices followed, crop shares, and planted acreage. These audits were the basis for a large number of criminal investigations and grand jury indictments. FSA county committee members and county office employees have been removed as a result of these audits.

Our findings were considered by Congress as it developed the ad hoc program for 1994 and the Noninsurance Assistance Program for future years. Congress made legislative changes, and FSA revised its administrative procedures to prevent the kinds of problems we identified. For example, a basic rate for crops carried through harvest and lesser rates for crops not planted or harvested have been established. Also, producers are required to provide evidence that nonprogram crops are produced on the farm and have a market,

document their farming practices and furnish copies of their contracts with canneries, and report all cropland and crops by required reporting dates. FSA is required to (1) assign production for losses not caused by disaster and for payments under contract guarantees, (2) verify income for all producers that may exceed the \$2 million limit, (3) verify with FSA's risk management program area that producers with insurable crops are properly insured, and (4) make good or bad faith determinations for all questionable producer applications. FSA has increased the penalties for producers who are found not to have made good faith efforts in producing the crop or reporting losses to them.

Disaster Assistance Fraud -

An OIG audit of the Disaster Assistance Program (DAP) in Brooks and Jim Hogg Counties, Texas, disclosed evidence that false claims had been filed. In December, 1994, several cases were referred by Audit for investigation.

An ongoing joint audit/investigation has disclosed 28 producers that are suspected of submitting false claims for crop years 1990 through 1993. The producers submitted false seed receipts, chemical receipts and land leases in support of their fraudulent claims. The collective disaster payments made to the 28 producers totaled \$2,268,813 and primarily were for watermelon, cantaloupe and honeydew melon crops.

These investigations are being coordinated with the U. S. Attorney's Office, Southern District of Texas, Corpus Christi, and with the U. S. Attorney's Public Corruption Division, Houston, Texas. Thus far, eight subjects have been indicted, of which five have pled guilty and one of the five sentenced. Our investigations are continuing.

Payment Limitation

The Food, Agriculture, Conservation, and Trade Act of 1990 continued the \$50,000 payment limit on 1991 through 1995 program crops and the \$100,000 limit on disaster payments. The \$100,000 limit is still effective for the new noninsurance program, and other limitations also apply to such

programs as the marketing loans. We continue to identify payment limitation abuse by individuals who created additional entities to qualify "persons" for payment.

- An Arkansas State committee member and four other producers claimed to be five separate operations for disaster payment purposes when, in fact, they were members of a family that had formed a joint operation. This misrepresentation enabled them to receive about \$1.5 million in excessive payments over a 3-year period.

- A Georgia producer claimed he owned an entire cotton crop when he insured it with the Federal Crop Insurance Corporation (FCIC). However, to receive more Government payments, he reported to FSA that six people operated the farm, three of whom were his wife--who was a county committee member--and two sons. The Georgia State FSA Committee determined the producer engaged in a scheme to evade payment limitations and directed the producer to refund \$492,000 in program payments.

- In Oklahoma, three producers, including a State committee member, misrepresented to FSA the extent of their involvement in the farming operation of one of the producers. As a result, between 1992 and 1995, these three producers received \$532,000 in excessive payments. FSA is in the process of taking corrective actions to recover the excessive payments.

Warehouse Fraud

- A grain storage cooperative in Washington State and its general manager were sentenced after they pled guilty to submitting false statements to the Commodity Credit Corporation (CCC). The general manager was sentenced to 5 years' probation, fined \$18,000, and barred from providing future services without CCC's approval. Over a 3-year period, the cooperative illegally sold more than 900,000 bushels of CCC-owned wheat that it was being paid to store. As a result, the cooperative received almost \$500,000 in unearned profits and storage fees. As part of the settlement agreement with

CCC, the cooperative paid \$300,000 in restitution to CCC and agreed not to employ the general manager in any capacity without approval from CCC. An FSA warehouse examiner assisted OIG in this investigation.

90-Day Rule

The Food, Agriculture, Conservation, and Trade Act of 1990 provides that in the absence of misrepresentation on the part of a producer, any determination FSA makes regarding the producer's participation in farm programs shall be final after 90 days, and no action shall be taken to recover overpayments. This 90-day rule applies to erroneous decisions, calculation errors, or overpayments discovered on or after November 28, 1990.

FSA records show that as of January 31, 1994, producers had received over \$2 million in unearned benefits due to application of the 90-day rule. These kinds of unearned payments are expected to continue. We determined those cases that are valid under the 90-day rule generally involve only small amounts, where repayment would not place an unreasonable burden on producers. Furthermore, FSA has authority to grant relief to producers if conditions warrant. We recommended that FSA officials seek legislative change to rescind the 90-day rule. This recommendation is under consideration by the Department.

Conservation Reserve Program (CRP)

FSA, with technical assistance from the Natural Resources Conservation Service (NRCS), is responsible for administering CRP. The program was established to assist farmers in preventing and controlling soil erosion on highly erodible and environmentally sensitive cropland.

Our audit, requested by officials of the NRCS Wisconsin State Office, assessed the extent of inaccurate land eligibility determinations which had been initially identified during a 1993 internal quality review of CRP cases. Our analysis of statistically sampled cases showed that incorrect eligibility

determinations had been made on 34 of the 41 sampled contracts; all or part of the acres enrolled under each of these contracts should have been rejected because they did not meet the regulatory definition of "highly erodible land." The contracts were accepted because the NRCS official responsible for making the eligibility determinations failed to follow program procedures.

Based on our statistical projections, 16,000 of the 46,500 CRP acres in Iowa County, Wisconsin, were ineligible for the program, resulting in annual overpayments to producers of almost \$1.3 million. We recommended that FSA and NRCS review all contracts in Iowa County whose enrollment terms are to be extended so that any ineligible acres can be eliminated before the contracts are extended. The agencies agreed to implement our recommendations.

Requirement for Interest Assistance Needs Strengthening

The Interest Assistance (IA) Program subsidizes guaranteed loans to farmers. Under the program, FSA pays private lenders up to 4 percentage points of the loan interest rate provided the borrower's cash-flow can meet all operating expenses, taxes, scheduled debt payments, family living expenses, and provide for a reserve of at least 10 percent.

We randomly selected and reviewed IA agreements for 30 borrowers that were approved or renewed in fiscal years 1991 and 1992 in 6 States. We projected that 85 percent of the borrowers either were not eligible for IA, or were eligible for only a reduced rate of IA, and that IA subsidy payments to lenders were overstated by \$3 million. We also projected that borrowers with 522 of the 1,799 guaranteed loans authorized in the 6 States reviewed--29 percent totaling \$61.8 million--were not eligible for the guarantee. Corrective action is still under discussion within the Department.

NATURAL RESOURCES

NATURAL RESOURCE CONSERVATION SERVICE (NRCS)Significant Reduction in Soil Loss Achieved Through Conservation Compliance

Our audit of the NRCS' Conservation Compliance Provisions reported that erosion on the nation's highly erodible cropland was significantly reduced since the enactment of the Farm Security Act of 1985 and the Food, Agriculture, Conservation and Trade Act of 1990. Our estimates showed that a substantial reduction in average soil loss occurred on highly erodible cropland since implementation of the conservation provisions. We estimated that the average soil loss on highly erodible land was reduced from 9.5 to 5.1 tons per acre per year. And the average annual rate of erosion allowed by an alternative conservation system was 7.2 tons per acre. We estimated that the conservation systems which would reduce soil loss to the alternative conservation system level were not fully applied to all fields on 23 percent on highly erodible tracts.

More can be done to reduce the soil loss on highly erodible lands. Although our audit disclosed substantial progress by NRCS, we estimated that 23 percent of highly erodible land tracts still did not have adequate conservation systems in place. As a result, these producers continued to receive USDA benefits even though required soil loss levels were not achieved.

We concluded that the substantial amount of soil loss reduction resulted from NRCS' efforts to plan and oversee the application of conservation systems on highly erodible land. Other factors that may have contributed to the reduction in soil loss included economic considerations and changes in attitude regarding conservation. However, we also determined that NRCS had not established adequate performance measures to evaluate progress in meeting the goals for reducing soil loss.

We proposed that NRCS revise its status review process to generate additional information and analysis to provide a more accurate assessment of agency and producer accomplishments. NRCS agreed and will implement it for the 1996 status review process.

MARKETING AND REGULATORY PROGRAMS

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

Enforcement of the Animal Welfare Act

We evaluated whether APHIS had adequate procedures to administer the Animal Welfare Act of 1966 (the Act) as it pertains to research facilities and whether it was able to properly enforce the Act based on its authorities under current legislation. In FY 1993, 1,400 animal-related facilities in the United States were active in research and used 2.3 million warmblooded animals for research purposes.

Under current legislation, APHIS is not able to effectively enforce the Act. For example, it cannot immediately terminate licenses or refuse to renew them for any cause other than failure to pay the renewal fee. Terminating a license for any other cause requires an administrative hearing, which may take up to 3 years, during which time the facility remains in operation. Also, monetary penalties cannot be collected for violations unless the violator agrees to pay them. These penalties are often so small that violators regard them as a normal cost of doing business. In some cases, APHIS has no jurisdiction because the pet protection provisions of the Act do not cover stray animals that research facilities get directly from pounds and shelters.

We also concluded that APHIS does not make the most effective use of its existing authority. Because research facilities applying for new licenses are not inspected before the licenses are issued, these facilities can be out of compliance with the Act from the outset of their operation. Monetary

penalties are not aggressively collected, and facility operators who routinely refuse admittance to APHIS personnel are accommodated.

We recommended that APHIS seek legislative authority to revoke licenses or withhold renewals and extend the pet protection provisions of the Act to include strays acquired by research facilities. We also recommended that APHIS inspect research facilities before issuing first-time licenses, take aggressive action to collect monetary penalties, suspend operators who deny APHIS personnel access, revoke the licenses of repeat offenders, broaden inspection coverage of research facilities, and improve the system to track inspections. APHIS officials agreed with our recommendations and have already undertaken corrective actions. The Department has prepared legislation which is in the clearance process.

In addition, we are involved in investigations concerning markets for stolen pets and the abuse and mistreatment of animals by dealers, who subsequently sell these animals to pet stores for sale to the public.

APHIS Monitoring of Precleared Program Operations Needs to be Improved

We reviewed APHIS' procedures for implementing the preclearance program for fruits and vegetables in the countries of origin and at U.S. ports of entry. We reviewed preclearance operations in three countries of origin: Chile, Mexico, and Venezuela. While preclearance programs in Chile and Venezuela were operating as prescribed, preclearance operations in Mexico did not always follow APHIS procedures. Mexican contract inspectors did not ensure that exportable and nonexportable fruits were kept separate and did not require the removal of damaged fruit from the facilities. Packing houses were also not properly safeguarding fruit from reinfestation and were not shipping it in contamination-proof containers.

We also found that APHIS needed to better monitor precleared fruits and vegetables at U.S. ports of entry. Dockworkers stored precleared fruits and vegetables with uncleared shipments, and APHIS inspectors did not always

verify that shipments marked as precleared were, in fact, precleared. In addition, longshoremen routinely removed USDA seals from precleared cargo containers, but APHIS inspectors did not enforce regulations which prohibited doing so.

We recommended that APHIS improve its monitoring of offloaded cargo and its verification of precleared cargo and enforce existing requirements. We also recommended that APHIS clarify and document inspection procedures, establish procedures to review preclearance operations at U.S. ports of entry, and assess the effectiveness of preclearance programs in each country. APHIS agreed to improve controls over preclearance operations and provided instructions to regional offices to satisfy our recommendations.

HOUSING PROGRAMS

RURAL HOUSING SERVICE (RHS)

Rural Rental Housing Program (RRH)

Legislation Needed for RRH

During the last fiscal year, we dedicated significant resources to audits of RHS' RRH Program. We identified conflicting legislative requirements that prevented the agency from full compliance with some provisions of the Housing Act of 1949. This Act requires that Government assistance to the housing projects be limited to the amount necessary to provide affordable housing. Another section of the law limits RHS from requiring developers to contribute more than 5 percent equity to a project if low-income housing tax credits are received. RHS has no control over the allocation of tax credits; the individual State tax agencies have this authority. Therefore, RHS can only limit assistance to developers by decreasing the amount of the loan. To do so, however, would have the effect of increasing the developer's contribution to the project and, thus, would be in conflict with the 5-percent limitation. If the legislative barrier had not existed, a total of about \$285 million in

loan funds would have been subject to reduction pending the determination of the necessary level of assistance. These funds could have been available to build other needed projects. Our report recommended that RHS seek a legislative remedy to resolve the legislative conflict. RHS concurred and has drafted a legislative proposal to address this issue.

To supplement the agency's legislative package to be developed in response to our audit of RRH loanmaking, we performed a comparative analysis of the various statutory enactments for both the Department of Housing and Urban Development (HUD) and RHS to determine if differences existed and, if so, whether the RRH program could be strengthened if the HUD provisions were in effect. We also compiled and analyzed our audits, GAO reviews, and agency-performed studies to identify additional potential legislative issues.

Our review developed seven different legislative proposals. One of the most significant initiatives is aimed at enhancing RHS' capability to prosecute borrowers who misuse project funds. HUD has specific legislation which provides both for criminal avenues to prosecute wrongdoing and for civil remedies to recoup lost funds, but USDA does not have similar legislation. The legislation, called "equity skimming," has been successfully used by HUD, and enactment of similar legislation for the RHS program would greatly reduce its vulnerability to fraud, waste, and abuse. Other legislative proposals we developed included measures to enhance project income, better account for project funds, eliminate windfalls to borrowers due to excessive Government rents, and significantly restrict borrowers' use of companies having an interest with the borrower or management agent and which provides goods and services to RRH projects. In our view, identity of interest companies created by principals of the borrower or managing agent solely for the purpose of providing goods or services only to themselves is the single greatest cause of the extraordinary vulnerability associated with the RRH program.

Audits of the RRH Program Continue to Show Problems

Other audits of the RRH program identified misuse of program funds. Based on our work, one borrower was requested to refund over \$1 million transferred to other interests. We also recommended debarment of the borrower and his associated companies, owners, directors, and president from participation in RHS or other Federal Government contracts.

RRH Defrauded

- The president of a New York real estate management company pled guilty and was sentenced to 18 months in prison, fined \$7,500, ordered to pay \$664,000 as restitution, and forfeited an additional \$913,500 for his having defrauded the RRH program out of over \$1 million and evaded income taxes. The president illegally received over \$913,000 in builders' profits from the RRH projects that he managed and stole another \$250,000 from the projects' laundry accounts. He was also administratively debarred from all Government programs. The construction company that had conspired with the management company president to pay the illegal fee also pled guilty and was fined \$300,000.

RESEARCH, EDUCATION, AND ECONOMICS PROGRAMSMulti-Agency Review Challenges \$5 Million Expended by USDA Grant Recipient

A private, nonprofit organization received millions of dollars from multiple Federal and State sources to make fish farming more commercially feasible. Since 1985, USDA had contributed \$37.8 million through the Agricultural Research Service (ARS) and Cooperative State Research, Education, and Extension Service (CSREES). The Hawaii-based organization used these funds to develop its facilities and support research on shrimp culture. We worked with ARS and CSREES to review the recipient's expenditures against the work authorized by the multiple grants and agreements. We questioned almost \$2 million of the USDA funds that had been expended for unauthorized construction and equipment and \$3 million that was unallowable either under

the terms of the agreement or by Federal regulations. Both agencies have agreed in general with our findings and are working with the grantee to recover funds.

MARKET DEVELOPMENT

FOREIGN AGRICULTURAL SERVICE (FAS)

Food Aid Assistance Programs, Suggestions for the Proposed 1995 Farm Bill

FAS asked OIG to evaluate Title I of the Agricultural Trade and Development and Assistance Act of 1954, better known as the Public Law 480 program, and to offer suggestions for the Department's 1995 farm bill legislative proposal. We made two suggestions.

The first was that the Title I program objectives be more narrowly defined to limit the program to developing export markets. The second suggestion was that FAS seek legislation to exempt Title I shipments from U.S. flag vessel cargo preference requirements or to change the ocean freight differential to a direct maritime subsidy, funded and administered by the Department of Transportation. For the last 3 fiscal years, ocean freight differential payments totaled \$131 million, and USDA officials estimated it costs \$365,000 annually to administer the cargo preference requirements.

ACCOUNTING AND FINANCIAL MANAGEMENT

As required by the Chief Financial Officers Act, we completed eight financial statement audits. We issued unqualified opinions on the fiscal year 1994 financial statements of CCC, FCIC, the Rural Electrification Administration, and the Rural Telephone Bank. Audits of the Forest Service (FS) and the Farmers Home Administration/Rural Development Administration (FmHA/RDA) received qualified opinions. FS received a qualified opinion primarily because of errors in supporting data for plant, property, and equipment; and the inability of financial personnel to timely complete their work due to

fire-related duties from an especially bad forest fire season. FmHA/RDA received a qualified opinion due to the absence of supporting documentation for estimates used to determine its allowance for subsidy on direct and guaranteed loans obligated after FY 1991. We issued a disclaimer of opinion on both the FCS and the USDA consolidated financial statements for FY 1994. FCS received a disclaimer because it could not fully support almost \$14 billion of operating and program expenses and over \$3 billion of nonoperating changes. The USDA consolidated financial statements received a disclaimer due to cumulative problems with financial statements for FCS, FS, and FmHA/RDA.

We have made a significant commitment to help FCS overcome its systems weaknesses by providing management advisory services to the agency. We developed and implemented a management advisory group and have assigned a senior auditor to work closely with FCS to rectify long-standing encumbrances to accurate reporting. FCS, too, is committed to work with us to overcome past problems. This commitment is exhibited at the highest levels within the Department. We have had numerous meetings with the Under Secretary as well as the Administrator to keep them informed of the status of the financial statement activity. Through our mutual interface, positive strides are being made.

The Department and its agencies are exerting considerable effort to improve their financial systems and reporting processes. Work continues on the Department's Financial Information System Vision and Strategy (FISVIS), the purpose of which is to develop a blueprint for a single integrated financial management system that meets the Joint Financial Management Improvement Program's requirements and fulfills the needs of USDA managers. We are providing audit assistance to the Department in the design and development of FISVIS, and we believe FISVIS will improve the quality of USDA's financial information. The Department estimates that the FISVIS foundation system will be implemented by FY 1998 and that all USDA financial management systems will be integrated within approximately 4 years.

Although USDA is emphasizing financial accountability and improving its financial systems, instances of inaccurate and inconsistent application of accounting principles, inaccurate and incomplete accounting records, and errors and omissions in account balances will continue to exist until corrective changes are fully implemented.

INFORMATION RESOURCES MANAGEMENT

We monitored InfoShare developments and provided technical assistance to the project staff. InfoShare is a program expected to cost in excess of \$1 billion to integrate information systems and business processes in order to improve delivery of services to customers of farm service and rural development agencies. Since early FY 1995, the InfoShare Program Office has undergone two changes in management with a complete changeover in staff and reporting channels. With the implementation of the reorganization structure defined in the 1994 Reorganization Act of USDA, the InfoShare Program Office was merged with the Field Service Center Implementation Team (FSCIT). FSCIT is under the direction of the National Food and Agriculture Council Subcommittee for Field Offices, whose members are the administrators of participating partner agencies in the reorganization. To meet the goals of InfoShare and provide 1-stop shopping for USDA customers, FSCIT serves as the driving force for the establishment of improved customer service centers at approximately 2,500 field offices. All service centers are scheduled to be established by December 1997.

During FY 1995, our monitoring efforts focused on direction and management problems of the InfoShare Program Office and its merger into FSCIT. A duplication of effort was identified and reported. We also questioned the ability to accomplish goals and objectives of the program without increased involvement from the most senior levels of USDA. Of continuing concern has been the adequacy of FSCIT's strategic planning for InfoShare and its efforts to complete a satisfactory reengineering program with the partner agencies. With this large investment in resources and the potential impact on program

delivery at the field office level, we believe that continued monitoring of the InfoShare Program is needed.

EMPLOYEE INTEGRITY

During FY 1995, we issued 76 reports of investigation concerning serious allegations of misconduct by USDA employees. Our investigations resulted in 21 convictions of current and former USDA employees and 57 personnel actions, including reprimands, suspensions, removals, resignations, and alternative discipline.

CONCLUSION

This concludes my statement, Mr. Chairman. As you can see, Mr. Chairman, the work of the OIG is far reaching and expansive. I appreciate the opportunity to appear today and present this information, and I hope that my comments have been helpful to you and the Committee. I will be pleased to respond to any questions you may have at this time.

OFFICE OF THE SECRETARY AND DEPARTMENTAL ADMINISTRATION PREPARED STATEMENT OF WARDELL C. TOWNSEND, JR., ASSISTANT SECRETARY FOR ADMINISTRATION

Mr. Chairman and members of the Subcommittee, good morning. I am pleased to present the fiscal year 1997 budget request for headquarters-level and Department-wide activities. My presentation will discuss the appropriations requests for Departmental Administration, Agriculture Buildings and Facilities, including the Department's Strategic Space Plan, USDA Advisory Committees, Hazardous Waste Management and the Office of the Secretary. With me today to ensure thorough and complete answers to your inquiries are key members of the Department's financial management leadership: Ted David, Acting Chief Financial Officer, Steve Dewhurst, the Department's Budget Officer and Connie Gillam, the Budget Officer for Departmental Administration.

USDA REORGANIZATION

As I testified to last year, USDA has begun to undergo a "reinvention" that has consolidated its 43 agencies into 29 along mission lines, and consolidated administrative functions within those mission areas. During this same time we have begun to streamline our organization, which has allowed us to achieve significant reductions in our staff years. By the end of 1995, USDA was ahead of schedule and had reduced its staff years to less than 104,000, a reduction of 5,000 staff years below the Streamlining Plan, and more than 10,000 below the 1993 level of 114,000. These reductions have been accomplished largely through voluntary attrition, including the use of our buy out and early out authorities. Our collocated Career Resource Transition Centers in Washington and Kansas City have been a valuable tool in outplacement assistance for those affected by our rightsizing process.

In addition, these reductions will help USDA to meet its targeted savings through reductions in staff year costs, and administrative expenses. By 1999, our streamlining activities will reduce headquarters staffing by 24%, cut supervisory positions by 37%, and reduce support personnel Department-wide by between 18% and 22%, including personnel, budget, and procurement specialists.

Over the next few years, USDA will also complete the reorganization of its county-based field offices to reduce from about 3700 locations and establish approximately 2500 USDA Service Centers, for offices of the Farm Service Agency, Natural Resources Conservation Service and the Rural Economic and Community Development mission area. In addition, in 1995, approximately 60 field office closures were completed by other USDA agencies.

DEPARTMENTAL ADMINISTRATION REORGANIZATION

Over the last year, many structural changes have taken place within Departmental Administration (DA) which will place DA in a better position to meet the challenges that we face today and those in the years to come. In the current budgetary environment, we in administrative management are having to learn to do more with less. The National Performance Review and the USDA reorganization were the catalysts for many of the changes that have taken place this past year. Formerly, DA was structured into four separate offices, as well as three program offices, each with a clearly defined role and mission, that operated independently of each other. These were the Office of Civil Rights Enforcement, Office of Personnel, Office of Operations, Office of Information Resources Management, as well as the Modernization of Administrative Processes program, the Hazardous Waste Management program, and the InfoShare program. While these offices did share information on cross cutting issues, a basic truth existed that has plagued DA for many years: Operational activities tended to overshadow and hinder oversight and compliance work. Over time, many organizations are afflicted by this dynamic. DA has a diverse mission in that it is responsible for providing some operational support to the Department, while also overseeing internal compliance in administrative functions and serving as a clearinghouse for government-wide administrative initiatives. However, with all of these activities housed under one roof, conflicts existed as to the resources and attention each activity was receiving.

As with many other areas of the Department, DA recently reorganized to provide more clarity and focus of mission. The new alignment has placed the operational activities from the four program offices together within the Office of Operations, and placed their compliance and oversight functions

within a new single structure, the Policy Analysis and Coordination Center (PACC). In addition, we have streamlined the direct administrative servicing into one structure, which will allow us to provide services to DA and the USDA central offices in the most cost effective and efficient manner possible. This realignment will place us in a position to focus on our activities and provide better services to our customers.

We understand that in this fiscal environment, there simply isn't any new money. Implementing change on such a broad scale is far from easy, but then I knew that making Departmental Administration a customer-driven provider of services and policy leadership would be my greatest challenge. Fortunately, this committee and our dedicated, innovative work force have selflessly supported this effort.

REFOCUSING INFOSHARE

The Department remains committed to the goals of InfoShare. Now more than ever it is important to assure that USDA presents one face to the public and that our agencies' business and administrative processes are linked. Recognizing that the InfoShare goals were integral to the successful establishment of the USDA Service Centers, this initiative has now become a part of the service center implementation effort and is directly managed through a subcommittee of the National Farm and Agriculture Committee (FAC), composed of the Agency Administrators for the Farm Service Agency and the Rural Economic and Community Development mission area as well as the Chief of the Natural Resources and Conservation Service. I also serve on this subcommittee in an ex officio capacity. DA retains its normal responsibility for Department level oversight, and appropriate staff are available for consultation on issues related to property and procurement, information resources management, and business process reengineering.

State FACs, comprised of the partner agency heads at the State level, are charged by the National FAC with implementing county office streamlining and establishing "One Stop" USDA Service Centers.

The National FAC is staffed by an Executive Officer and a small interagency Service Center Implementation Team (SCIT), which coordinates the collective resources of the partner agencies. The SCIT facilitates Business Process Reengineering (BPR) and resulting requirements for enabling technology, i.e., a common computing environment, which will support efficient program delivery by a downsized field staff functioning as a USDA team in one-stop USDA Service Centers. The Deputy Administrators/Chiefs are responsible for leading the BPR efforts, and the partner agency Senior Information Resource Management Officers act collectively to ensure that telecommunications and automation requirements and initiatives are coordinated across agencies and with the Department.

The resources provided to the Secretary by the Congress for InfoShare are being devoted to the integration of business processes, building a common telecommunications infrastructure, and oversight activities. Substantial agency resources, in both dollars and personnel are also being applied to assure that the Service Center Initiative and the InfoShare objectives are achieved.

Recognizing the need for enhanced and expanded coordination of information resources management initiatives throughout USDA, the Departmental IRM office has taken the lead in establishing a USDA IRM modernization program. Working in collaboration with the agencies, the first phases of an IRM Modernization Plan have been developed and follow-on work is underway. Key elements of the implementation include a stronger

decision-making structure, to ensure that information resources are applied across the department toward common goals; the development of an information architecture, with a strong initial focus on telecommunications; and the improvement of our project management capabilities. Thus the goals of the former InfoShare program are now being addressed in the context of a broader departmental mandate. The USDA IRM Modernization Project, initiated by Secretary Glickman in July, 1995, is an interagency effort to improve the management of the Department's information resources. Cooperatively, USDA senior IRM managers have identified specific activities and projects that, collectively, will position the Department to meet new legislative requirements and address changing demands facing the USDA IRM community.

REENGINEERED BUSINESS PROCESSES

Over the last few years, the Subcommittee has assisted USDA in its drive to achieve department-wide savings from its Modernization of Administrative Processes (MAP) program. These MAP activities will develop into more effective ways of doing business and will translate in future cost avoidance and provide a foundation for administrative activities within the department. I am proud to discuss with you the achievements we have been able to accomplish since I last testified.

Great attention has been focused on the issue of procurement reform, and in particular, on ways in which we can bring down the administrative costs of procurements. One idea was to replace purchase orders with government credit cards for purchases under \$2,500, and maximizing its benefits by changing the systems used through Business Process Reengineering (BPR). Slow and inefficient paper purchase order procedures cost about \$77 per transaction while credit card transactions cost around \$32 each. Most people would be happy with that. But our MAP team, in

partnership with agency personnel, plan to reduce the cost of credit card transactions. The team found that almost half of the cost of the credit card purchases was in cumbersome, inefficient layers of review and reconciliation. The reengineered process that MAP helped develop should help to bring the average cost of a transaction down to approximately \$17 per transaction. That equates to a potential cost avoidance of \$45 million USDA-wide by the year 2000. Earlier this month, team participants evaluated software interfaces at the National Finance Center. That's just one area---we're looking at more.

When MAP's work is done, it will leave as its legacy a more efficient and cost effective USDA. Because it undergoes a sunset review in 1999, I can assure you that once its mission is completed, MAP will not leave a bureaucracy behind. Only a better USDA.

RECYCLING

One of the missions of DA is also to advance environmental stewardship by promoting waste prevention, recycling, and acquisition of recycled, environmentally-preferable, and energy efficient products, especially those made from agricultural materials. Since this is an issue which ultimately affects all Americans, I would like to share with you a few examples of our achievements over the past two years. We are working towards source reduction of the number one office waste item, paper, by implementing e-mail communications, print-on-demand, and electronic commerce systems to serve our employees and our customers. Over 85% of all USDA printing is done on recycled content paper using soy-based ink. We are also pursuing with EPA the use of annually renewable fiber crop paper, such as kenaf paper, as an alternative to recycled paper, and we are the only Federal department to have

secured a waiver from the recycled paper executive order requirement to pilot use of kenaf for some USDA printing. We have signed the Energy Efficiency and Resource Conservation Challenge, pledging USDA's buying power to use good business sense to purchase best practice energy and water efficiency products, and we have issued an internal policy statement giving preference to recycled content, environmentally-preferable, and energy-efficient products and services. At USDA headquarters, we have instituted an ongoing environmental program which includes collection of recyclables from the waste stream, promotion and education of employees, and providing recycled products through our central supply stores.

DEPARTMENTAL ADMINISTRATION BUDGET REQUEST

The fiscal year 1997 Departmental Administration budget request totals \$29,137,000, an increase of \$715,000 over the adjusted fiscal year 1996 level of \$28,422,000. Of this increase, \$781,000 is for pay cost increases, and there is a decrease of \$176,000 for administrative reductions partially offset by a \$110,000 increase for increased costs in non-salary object classes due to inflation.

I now turn to the individual budget requests for the other appropriations, starting with the Office of the Secretary.

OFFICE OF THE SECRETARY

The offices of the Secretary (OSEC) provide policy oversight and guidance for the Department and maintain relationships with agricultural organizations and others in the development of USDA programs. OSEC also oversees special projects that are conducted at the behest of the Congress. These projects include short-term studies, investigations, and research on matters affecting the Department or its constituents.

The budget request for the Office of the Secretary for fiscal year 1997 is \$18,932,000, an increase of \$515,000 over the 1996 current estimate. This increase consists of \$345,000 for pay costs, a restoration of \$230,000 to fund the Office of the Under Secretary for Food Safety and the Office of the Undersecretary for Food, Nutrition and Consumer Services, and is offset by a decrease of \$60,000 for administrative efficiency.

AGRICULTURE BUILDINGS AND FACILITIES

Our 1997 budget request of \$149,635,000 a net increase of \$14,260,000 above the adjusted 1996 appropriation level.

There is a \$5,615,000 increase for Rental Payments to pay GSA for the full cost of USDA's nation-wide space inventory in fiscal year 1997. USDA has assumed responsibility for the operation and maintenance of the four building downtown complex under its Strategic Space Plan in lieu of rental payments to GSA.

An increase of \$3,500,000 is needed for the Kansas City Collocation Project and an increase of \$5,067,000 is for the new leased facility in Riverdale. The Kansas City Collocation Project will collocate several agencies -- AMS, FSA, FCS, FSIS, GIPSA, OGC, and OIRM -- and require approximately 500,000 gross square feet of space to house 2,200 personnel. The collocation of seven USDA agencies will maximize operational efficiencies and improve the performance of USDA agency missions and programs; achieve economies through better utilization of common facilities and support space; effect major improvements in employee working conditions and morale; enhance the quality of the Federal workplace; and create an effective partnership in managing and administering Federal real property assets. The Riverdale Project consolidated several USDA agencies into safer, healthier facilities that enhance the quality of work life.

A net increase of \$78,000 for Building Operations is needed to continue operations and support of the downtown complex.

The Agriculture Buildings and Facilities request maintains the fiscal year 1996 level funding of the Strategic Space Plan. The request includes funds for the first phase of the modernization/renovation of the South Building; the beginning of a program to finally correct long-standing fire and safety deficiencies as well as replace major systems. In addition, this request includes funds for the construction of the new Beltsville, Maryland office building on USDA land adjacent to the Agricultural Research Center and to equip the new facility. These are critical components of the Strategic Space Plan, a planned effort which began in fiscal year 1995 to eventually collocate all USDA personnel, currently in more than 17 leased office sites around the Washington area, in two locations--Beltsville and the Washington, D.C. headquarters complex.

ADVISORY COMMITTEES

The fiscal year 1997 USDA Advisory Committee request of \$706,000 is \$56,000 above the fiscal year 1996 level. Funding is included in the request for the Census Advisory Committee on Agriculture Statistics (CACAS). This committee will provide advice on the conduct of censuses and surveys of agriculture. This level also maintains the activities of a reduced number of committees at current levels of effort.

HAZARDOUS WASTE MANAGEMENT

The safe disposal of hazardous waste is a challenge which we must meet. We are now paying the cost of corrective actions associated with environmental problems caused by past disposal methods. The Department requests \$15,700,000 for the Hazardous Waste Management program for

fiscal year 1997 under the CERCLA and RCRA acts. This is the same funding level as last year. This level will allow agencies to continue to cleanup the most critical USDA sites. Funding from this appropriation is allocated to agencies based on priority needs and made available until expended. In addition to the amount proposed in this appropriation, approximately \$30 million of USDA agencies' funds also will be used to clean up hazardous waste sites.

This concludes my statement, Mr. Chairman. I am happy to answer any of your, or the Committee members' questions.

OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION
PREPARED STATEMENT OF SHARRON HARRIS, DIRECTOR

Mr. Chairman and members of the Subcommittee, I am pleased to discuss with you the fiscal year 1997 request for the Department of Agriculture's (USDA) Office of Small and Disadvantaged Business Utilization.

Our mission is very simple. The Office of Small and Disadvantaged Business Utilization has the responsibility to increase the number of business opportunities available to, small, disadvantaged, and women-owned businesses; identify and eliminate barriers that prevent or severely restrict small business participation in providing goods and services to the Department; establish partnerships to promote the growth and competitiveness of the small business community; and provide Department-wide leadership in the implementation and execution of programs under Sections 8 and 15 of the Small Business Act, as amended, as well as Executive Order 12432.

Established on June 26, 1979, the Office of Small and Disadvantaged Business Utilization is the only organization within USDA that is statutorily tasked to foster and serve as advocate for the use of small, disadvantaged, minority, and women-owned

businesses as federal contractors. We are the Department's central point of contact for general inquiries from industry and the small business community, the Small Business Administration, and from Congress on issues relating to the small business preference program. We are also the Department's central repository for advocacy and information for all programs affecting USDA's procurement activities impacting the small business community.

To accomplish our mission, we review major procurement programs, conduct outreach to the small business community, sponsor procurement conferences, evaluate subcontracting plans of major prime contractors, and provide counseling to small businesses.

Most small businesses that we make contact with are usually seeking contracting opportunities. This type of contact is expected because of the nature of our mission. We serve as a liaison between the small business community and the appropriate USDA agency that would most likely use their products. Our intervention saves marketing time for the small business and provides contracting officials with a greater number of qualified small businesses from which to select.

In our effort to provide the most comprehensive information and effective outreach regarding USDA programs that provide other than contracting opportunities to the small business community, we implemented in fiscal year 1995 an electronic bulletin board. This bulletin board provides the small business community greater access to information on potential contracting opportunities and USDA programs that support agriculture related businesses. USDA's bulletin board will be a benefit for small businesses that deal in any phase of agri-business, agricultural scientific research, product research and development, food processing, or exporting. USDA programs for which information currently resides on our bulletin board include the:

- a) Alternative Agricultural Research and Commercialization Center;
- b) Trade Assistance and Promotion Office;
- c) AgExport Connections Program;
- d) Market Promotion Program;
- e) Export Enhancement Program; and,
- f) Small Business Innovation Research Program.

We are proud of our entrance into the program arena and will continue to seek innovative ways to increase small business participation in all USDA programs. Our efforts increase small business participation and provide USDA management officials with a vehicle to promote their programs. It is hoped that our collaborative efforts to improve the comprehensiveness of our outreach will increase the small business community's interest in agri-business.

Fiscal Year 1997 Budget Request

The Office of Small and Disadvantaged Business Utilization is requesting \$804,000 for fiscal year 1997. This represents an increase of \$20,000 over the level available in fiscal year 1996. This modest increase is needed to cover increased cost of staff on board.

Mr. Chairman, once again, I would like to thank you and members of the Subcommittee for this opportunity to discuss the fiscal year 1997 request for the Department of Agriculture's Office of Small and Disadvantaged Business Utilization.

RELATED AGENCY

FARM CREDIT ADMINISTRATION

PREPARED STATEMENT OF MARSHA MARTIN, CHAIRMAN
AND CHIEF EXECUTIVE OFFICER

Mr. Chairman and Members of the Subcommittee. I am Marsha Martin, Chairman and Chief Executive Officer of the Farm Credit Administration (FCA).

I am pleased to highlight the Agency's accomplishments during the past year and to present FCA's budget request for fiscal year 1997. The FCA fiscal year 1997 Budget Justification and Supplement were submitted to the Committee last week.

Thank you, Mr. Chairman, Senator Bumpers, and all Members of the Subcommittee for two important provisions you approved as part of the fiscal year 1996 appropriations bill. First, by removing the limitation on FCA's administrative expenses, you enabled the FCA Board to manage and direct spending in a more efficient and accountable manner. I pledge to you our vigilance in carrying out this confidence that has been expressed by you. As an example of this vigilance, I present you a fiscal year 1997 budget request that is \$2.4 million below the budget for 1996. I will discuss this request in more detail later in my testimony.

Second, as a part of Public Law 104-37, you allowed FCA to pay the Office of Personnel Management a \$2.5 million enrollment fee so that 53 retired and current FCA employees could join the Federal Employees Health Benefits Program. This provision reduces insurance costs for FCA from almost \$300,000 in 1995, to approximately \$25,000 paid annually under the new legislation -- a difference of \$275,000 in our annual operating costs.

MISSION OF THE FARM CREDIT ADMINISTRATION

Our mission at FCA is to promote a safe and sound, competitive Farm Credit System (System). While we are not involved in the day-to-day management of System institutions, FCA does ensure that the System complies with the law and regulations, and exercises safe and sound banking practices. In turn, the System's role is to improve the income and well-being of America's farmers and ranchers through the extension of sound, adequate, and constructive credit. We are proud of our performance in carrying out our mission, and we are pleased also with the progress the System has made in recent years.

CURRENT ACTIVITIES AND ISSUES

The Farm Credit Administration is undertaking an ambitious management and regulatory agenda for fiscal year 1997. The Agency's five-year strategic plan challenges us to:

1. Minimize risk to the System's customers/shareholders, investors, and the Farm Credit Insurance Fund;
2. Implement effective regulations and policies that impose minimal burden; and
3. Enhance FCA's effectiveness and cost-efficiency.

We continue to aggressively pursue cost savings at FCA, while maintaining our capability to ensure a safe and sound System. Earlier this year, Congress passed the Farm Credit System Reform Act of 1996. We expect this legislation, which was signed into law by President Clinton on February 10, 1996, to help FCA achieve even more long-term budget savings.

First, this law extends the maximum time interval between examinations of most System institutions from 12 to 18 months. This will allow our examination teams to direct their resources at areas where we determine there is the most risk. In addition, this new law provides FCA with some new authorities that will remove needless regulatory burden on the System, enhancing FCA's own initiatives started more than a year ago.

Primary regulatory projects currently under review by the Agency will reduce the burden of FCA's regulations and promote even greater safety and soundness of System institutions.

For example:

- The FCA Board proposed capital adequacy regulations that establish stronger capital requirements for banks and associations and require the issuance of capital directives as risk necessitates.
- The FCA Board proposed regulations on eligibility and scope of financing to remove certain unnecessary restrictions on who is eligible to borrow from System entities. Previous restrictions, imposed more than 20 years ago, were not required by statute.
- The FCA Board plans to modify regulations covering general financing agreements between Farm Credit Banks and their affiliated associations, adding flexibility to the financing agreement approval process under established guidelines.

This past year, FCA improved its financial management system significantly. As a result, FCA was removed from the Office of Management and Budget's (OMB) high risk list. These efforts to strengthen FCA's financial management system were closely coordinated with OMB. In addition, we are proud of the fact that FCA received an unqualified opinion on its financial statements from its external auditors for both 1994 and 1995.

CONDITION OF THE FARM CREDIT SYSTEM

Mr. Chairman, as mentioned earlier, I am pleased to report that the System has regained its financial strength. During 1995, its earnings reached a record \$1.2 billion. Total System capital, as a percentage of total assets, averaged 13.6 percent at the end of 1995, compared with 13.2 percent at year end 1994. The quality of System assets also continues to improve. Nonperforming assets comprised only 2 percent of total loans and other property owned at the end of 1995, down from almost 3 percent a year earlier. Overall loan volume is up slightly.

The strengthened financial condition of the System is reflected by improved CAMEL ratings -- the Agency's evaluation of an institution's capital, asset quality, management, earnings, and liquidity. The percentage of System institutions rated 3, 4, or 5 dropped from 44 percent at the end of 1991 to just 6 percent on December 31, 1995. The number of System institutions under enforcement action also declined substantially, from 77 at December 31, 1991, to 8 at December 31, 1995.

FEDERAL AGRICULTURAL MORTGAGE CORPORATION

FCA has oversight responsibility for the Federal Agricultural Mortgage Corporation (Farmer Mac). In 1995, Farmer Mac's losses continued, further eroding its capital. However, enactment of Public Law 104-105 gives Farmer Mac authority to buy loans directly from lenders, assemble its own pools, and guarantee securities, without the requirement for a minimum 10-percent reserve or subordinated participation interest. In addition, Farmer Mac was granted a two-year delay in implementing statutory minimum capital standards, which were adjusted upward to reflect the risks in the pooling activity.

With these legislative changes, Farmer Mac's business outlook is brighter but not certain. Through our Office of Secondary Market Oversight, we will continue to monitor Farmer Mac's progress. In conjunction with the Treasury Department, we will also report semiannually to Congress on Farmer Mac's condition during the interim period of capital forbearance. Under Public Law 104-105, FCA was granted authority to place Farmer Mac in receivership if it becomes nonviable or insolvent.

FISCAL YEAR 1997 BUDGET REQUEST

Mr. Chairman, having reported recent events and actions of the Agency, I now propose a budget of \$37.5 million for fiscal year 1997. As I mentioned previously, this amount is \$2.4 million, or 6.1 percent, less than the \$39.9 million presented to the

Committee for fiscal year 1996. Earlier in my testimony, I expressed my appreciation to the Committee for its decision last year to give the FCA more accountability for its budget by removing the limitation on FCA's administrative expenses.

Our commitment to FCA's effectiveness and cost-efficiency is one that I, as FCA Chairman and CEO, take very seriously. In addition, I am pleased to report to the Committee that on October 2, 1995, the FCA Board approved budget revisions that are projected to bring Agency fiscal year 1996 spending down to \$37.7 million, \$2.2 million less than the amount proposed a year ago.

Our fiscal year 1997 budget request reduces full-time equivalents (FTEs) from the 384 in the fiscal year 1996 budget to 357. This is well below the OMB established target of 408 FTEs for the Agency by fiscal year 1999. In fact, FCA has reduced its FTEs by one-third since 1991.

Last year, I asked FCA staff for a long-range staffing plan to determine the human resources needed to carry out the Agency's mission. This plan will be the blueprint for staffing decisions over the next five years. It will provide the necessary framework so that we can achieve the optimal mix of people, skills, and office locations, including the appropriate ratio of managers and supervisors to other personnel.

We are proud of our record as a safety and soundness regulator of the Farm Credit System, and in line with our discussion of the budget, we are proud of the fact that we continue to hold the line on costs while accomplishing our mission.

Mr. Chairman, we welcome any questions you might have.

QUESTIONS SUBMITTED BY SENATOR COCHRAN

Competition

Question: Chairman Martin, I recently read an article about a speech you gave in which you discussed the problem of competition between Farm Credit System institutions and commercial banks, and the increasing problem of competition among Farm Credit System institutions. According to the article, commercial banks now control 40% of farm lending, up from 20% about 15 years ago. In the same time period, Farm Credit System control of farm lending has decrease from 33% to 25%. So it appears that Farm Credit System institutions are competing among themselves for a smaller share of business.

- Are there identifiable reasons that the Farm Credit System institutions have continued to suffer losses in market share?

Answer: Historically, the FCS market share has tended to rise when agricultural commercial banks are illiquid, and to fall as the commercial banking system becomes more liquid. In fact, this countercyclical result has been cited as evidence that the FCS is performing as Congress intended, assuring farmers a reliable supply of funds through the entire economic cycle.

FCA recognizes that there have been significant changes in both agriculture and financial markets which probably have weakened this historic relationship, but it is still of fundamental importance. The period from the mid 1980s until early 1995 has been one of relatively ample liquidity for agricultural commercial banks. Also, FCS was weak in the mid 80's as borrower stock was impaired in some cases, resulting in some borrower flight. In addition, some FCS borrowers were unable to survive the stress of the mid 80's.

The trend of the past decade may now be reversing. Since mid 1995, we see FCS volume, and possibly market share, growing again, corresponding generally to the point where average loan-to-deposit ratios of rural banks moved above 60 percent.

Recovery of financial health of the FCS also played a role, restoring borrower confidence and permitting more competitive interest rates. Finally, the FCS has tended to dominate only the mortgage side of farm lending, and the demand for such loans has been relatively soft for nearly a decade, due to the slow change in land prices. The recent dramatic growth in agricultural exports appears to have accelerated land price increases since mid-1995 in areas growing export crops, which will likely translate into growing loan volume and could result in increased market share. Guaranteed farm program payments over the next 7 years will provide further cashflow strength to support land prices. However, areas subject to the 1995-96 drought and those dependent on livestock enterprises will not see such gains.

- How do you intend to deal with the issue of competition among Farm Credit System institutions?

Answer: The issue of competition has long been a difficult one for the FCA and the System. As the System created by the Farm Credit Act has evolved, lending territories for System institutions have, with few exceptions, been exclusive. However, the Agricultural Credit Act of 1987 (1987 Act) contained two provisions, the implementation of which resulted in intra System competition. Section 413 permitted the banks for cooperatives to merge into a National Cooperative Bank with a national charter, permitting competition with banks for cooperatives that chose not to participate in the merger. Currently, two institutions, St. Paul Bank for Cooperatives and CoBank, ACB, have nationwide charters for title III loans. Section 411 required PCAs and FLBAs that shared substantially the same territory to conduct a merger vote. To the extent the territories were not identical, competition with long or short term lenders overlapped by the resulting Agricultural Credit Association resulted. Associations whose territories were overlapped were permitted to become ACAs, creating additional competition. Finally, the lending authorities of institutions chartered under titles I, II, and III overlap in several respects, permitting some competition among lenders of different types. For example, both FLCAs and PCAs are authorized to make loans with durations of 5 to 10 years that are secured with a first lien on real estate.

The FCA has been cautious in permitting competition among System institutions. We recognize that the robust competition with commercial banks and other lenders that exists in many parts of the country provides borrowers with many of the benefits of competition. Moreover, the cooperative nature of the Farm Credit System and, in particular, the joint and several liability of the System banks for debt issuances present unique challenges in developing a policy on intra-System competition. Nonetheless, the FCA believes that the current limited competition has not had undue adverse effects and recognizes that some competition may promote better service to the farmers, ranchers, and other rural Americans who own it. However, unlimited competition could adversely affect safety and soundness in the absence of System disciplines that reflect the importance of joint and several liability to lower funding costs. There is no easy answer.

The FCA has recently adopted a new policy statement on association structure. It modifies the former Agency position which, after the expiration of the 433 merger authority, has with a limited exception, not allowed the merger of PCAs and FLBAs unless their territories were identical. Under its new policy, in certain situations the FCA will consider approving merger applications from unlike associations whose territories are not identical as long as any adverse effect on neighboring associations is minimal. This policy is intended to facilitate the formation of ACAs and could result in additional competition in appropriate circumstances. It will not, however, speak to the many other concerns regarding competition expressed by other types of System institutions.

The Agency has previously expressed its preference that System institutions work out competition issues among themselves, to the extent possible. For example, FCA regulations permit a lender to make loans to eligible borrowers whose operations are conducted outside its chartered territory with the consent of the lenders where the operations are located. We continue to encourage System lenders to create cooperative solutions that can be mutually advantageous and that best meet the needs of borrowers.

System institutions do not share a single view on the wisdom of intra-System competition. A number of System institutions recently have asked the FCA to consider using a negotiated rulemaking process to resolve these issues. The FCA continues to believe that any workable solutions to the questions of competition are most likely to come from agreements forged among System institutions themselves. We thus believe that extensive FCS involvement, whether through a negotiated rulemaking, a Federal Advisory Committee, or another less structured approach, is a critical ingredient for success. We are now considering the merits of alternative approaches. Before embarking on any new course, the FCA must be confident that all relevant views are taken into account and that the prospects for success are substantial.

- Does your budget include adequate funds to do so?

Answer: Addressing the issue of intra-System competition remains an Agency goal. We expect that our budgets will be adequate to provide the needed resources to do so.

Strategic Plan

Question: Chairman Martin, you mention in your prepared statement three areas that the Farm Credit Administration's five-year strategic plan challenges.

- What actions do you anticipate taking with respect to these challenges?

Answer: The Agency has already initiated several actions, and plans to initiate others over the next five years to accomplish the following three goals in the strategic plan.

1. Minimize risk to the System's customers/shareholders, investors, and the Farm Credit Insurance Fund.

Some of the ongoing and contemplated actions include:

- Better identification and communication of systemic risks as they might affect the FCS.
 - Periodic reviews of examination quality and effectiveness.
 - Holding annual national workshops for examiners to keep their skills honed.
 - Expanding our off-site examination program for low-risk institutions.
2. Implement effective regulations and policies that impose minimal burden.

Key activities include:

- Eliminating unnecessary reporting and promoting more effective disclosure of financial information to the System's customers/shareholders and investors in FCS securities.
- Aggressively pursuing the regulation burden project, which I have highlighted in my prepared remarks.

- Implementing effective regulations that establish appropriate safeguards for the FCS at reasonable costs such as the recently proposed loan underwriting, scope and eligibility, and capital regulations.
- Creating innovative rule making and policy development techniques that promote public participation and improve timeliness.

3. Enhance FCA's effectiveness and cost efficiency.

Some of our initiatives include:

- Using more technology to improve examination quality and reduce costs.
- Improving employee satisfaction/morale through enhanced communications, progressive compensation programs, and a family-friendly workplace.
- Expanding the external communications program to better inform the public about FCA's mission and accomplishments.
- Streamlining and reengineering internal operations and processes, including elimination of unnecessary internal paperwork and procedures.

Although the Agency has adopted an aggressive agenda for the next few years, we believe it is achievable due to the dedication and professionalism of our staff.

Farmer Mac

Question: Chairman Martin, you mention in your prepared statement that the Federal Agricultural Mortgage Association, or Farmer Mac, incurred further losses in 1995. You also mention that the Farm Credit System Reform Act of 1996 will give Farmer Mac authority to purchase loans directly from lenders, assemble its own pools, and other new authorities.

- Will these changes improve Farmer Mac's performance?
- Can you recommend additional changes to further improve its performance?
- You mention FCA now has the authority to place Farmer Mac in receivership if it becomes nonviable or insolvent. How close are we to this becoming necessary?
- What impact would placing Farmer Mac in receivership have on the Farm Credit System as a whole? Would this impact interest rates? What effect would this have on the Farm Credit System Insurance Corporation?

Answer: The additional authorities obtained by Farmer Mac in the Farm Credit System Reform Act of 1996 remove statutory impediments to Farmer Mac's success. Whether or not these authorities improve Farmer Mac's performance depends upon how the program is marketed and whether an adequate market for Farmer Mac's program actually exists. The 1996 amendments also gave FCA authority to place Farmer Mac in receivership or conservatorship if such actions become necessary, and gave Farmer Mac capital forbearance for 2 years to test the new authorities. This forbearance gives Farmer Mac time to determine market response to the program.

It is not possible to predict with certainty whether the failure of a GSE would have any effect on the remaining GSEs. However, if it ever becomes necessary to place Farmer Mac in receivership, FCA does not believe the banks and associations of the Farm Credit System and their related entities would be adversely affected. The Farm Credit Act makes it clear

that Farmer Mac and other Farm Credit System institutions are not financially related in any manner. Should it ever become necessary to appoint a receiver for Farmer Mac, disclosure to investors would presumably stress this fact, so that the market does not react adversely.

Under the statute, FCA may, in its discretion, appoint the Farm Credit System Insurance Corporation as receiver. FCSIC may act as receiver for Farmer Mac, but it does not insure Farmer Mac obligations. Also, FCSIC would have no authority to satisfy any debts that could not be paid from the sale of Farmer Mac assets.

Budget Request

Question:

1. Chairman Martin, you mention in your prepared statement that the estimated budget for the Farm Credit Administration for FY 96 will be \$37.7 million, \$2.2 million less than was estimated this time last year. The Budget Justification also reflects reductions in many categories of the budget.
- What transpired to result in these reductions?

Answer: The budget estimate for FY 1996 a year ago totaled \$39,900,000, compared to the revised estimate of \$37,700,000. The difference of \$2,200,000 can be attributed to: (1) staff reductions due to retirements and resignations. These positions were not filled as a result of the Agency's streamlining initiatives such as its early retirement or voluntary separation buy-out plans implemented to address the Agency's long range staffing needs and results in a reduction of \$964,000; (2) a decrease of about \$433,000 in the budget for employee benefits primarily as a result of staff reductions; (3) a decrease of \$406,000 in the contingency reserve based upon management's decision to provide for a smaller reserve; and (4) the remaining difference of \$397,000 which is due primarily to a reduction in the Agency's travel budget based upon management's refinements of its budget estimates.

- Will the enactment of the Farm Credit System Reform Act of 1996 affect your budget estimates, or are those assumptions already included in the budget?

Answer: The Act signed into law on February 10, 1996, will not have an impact on the FCA's fiscal year 1996 budget estimates. The FCA will incorporate the recent legislative requirement into its fiscal year 1997 examination plan. The change from a 12-month examination cycle to an 18 month cycle is estimated to save between \$1.5 million and \$2.0 million annually.

2. Under the category "Benefits for former personnel," not counting the voluntary separation incentive payments, which are included in the budget, this category increases by almost 74% between FY 96 and FY 97, from \$352,000 to \$611,000.
- What justification is there for this substantial increase?

Answer: The FY 1997 budget for "Benefits for Former Personnel" includes \$258,883 in severance pay resulting from planned Reductions-in-Force (RIFs). These funds were budgeted for employees whose positions could be eliminated as a result of the Agency's recently released staffing plan.

3. The Office of Congressional and Public Affairs has increased from 4.6 FTE's in FY 94 to a budgeted 8.2 FTE's in FY 97, almost doubling in size.
- What justification is there for these substantial increases?
 - Please provide the budget for the Office of Congressional and Public Affairs for the past four fiscal years.

Answer: In 1994, the Office of Congressional and Public Affairs (OCPA) was significantly understaffed. Since then, FCA has increased the activities conducted by the OCPA, which has placed additional responsibilities on an already understaffed office. Some of these activities had previously been performed by other divisions within the Agency. For example, the responsibility for publishing the FCA Annual Report, which had been performed by the Agency's Office of Special Supervision and Corporate Affairs, is now produced and published by OCPA. As a result, that function and one FTE were permanently transferred to OCPA. In addition to increased Agency responsibilities, OCPA provides congressional and public affairs services, on a reimbursable basis, for the Farm Credit System Insurance Corporation (FCSIC) and the Office of Secondary Market Oversight (OSMO), which regulates Farmer Mac. The consistent workload maintained by this office has required clerical support by an employee "on detail" from another office in the Agency. In fiscal year 1997, this position would be permanently assigned and is included in the OCPA budget resulting in a total of 8 FTEs. The Agency's recent staffing plan will result in OCPA having 7 FTEs when the staffing plan is fully implemented.

The OCPA actual versus budgeted expenditures for the past four fiscal years was as follows:

FISCAL YEAR	BUDGET (000's)	ACTUAL (000's)
1993	\$440	\$415
1994	\$396	\$376
1995	\$608	\$547
1996	\$740	\$383(as of 4/30/96)

Farm Credit

Question: The President's FY 1997 budget for the U.S. Department of Agriculture includes reductions for many of the Department's direct production loan programs, and increases in the guaranteed loan programs.

- What impact do you anticipate this having on FCA-regulated institutions?

Answer: We understand that there will continue to be some USDA direct lending to farmers, with requirements that borrowers eventually graduate to commercial lending programs. Shift of moneys from direct USDA loans to USDA guarantees both (a) increases the volume of loans made by lending institutions and (b) substitutes the lender's credit standards on underwriting of guaranteed loans for USDA's credit standards on direct loans.

The FCS institutions already participate in the guaranteed loan program and will continue to use the guaranteed program if justified by individual borrower circumstances. Two routes are possible. First, a lender (such as an FCS institution or a commercial bank) may be involved from the outset with a new customer, deciding whether to grant the loan with a

guarantee, as well as in servicing the loan. Second, an existing borrower from the FCS who has suffered a financial reversal may continue to qualify for FCS loans, with the addition of a USDA guarantee. This may be of particular value in continuing to serve customers facing greater year-to-year volatility expected under the new "Freedom to Farm" legislation. It also is of value as an option in serving customers facing serious reversals from adverse weather or economic conditions.

The size limits on USDA guarantees will continue to focus the guarantee programs on the smaller commercial loan customers. The net effect on the FCS of the USDA shift will depend on how successfully the FCS competes with other commercial lenders for this guarantee business.

Farm Bill

Question: What impact do you anticipate the recently enacted farm bill having on farm credit and the institutions regulated by the FCA?

Answer: The 1996 Farm Act will provide about \$5.6 billion of additional revenue to program producers in 1996 and another \$5.4 billion in 1997. With the current commodity outlook, it would be several years before farm program outlays under the new Farm Act drop below those that would have been paid under a continuation of the previous law. Thus, from an aggregate revenue standpoint, the new Farm Act is favorable for the near future. However, greater uncertainty exists because producers will be dependent on potentially more volatile markets, and some farmers may fare better than others. The effect of the Farm bill on FCS institutions will depend on how well their borrowers adapt to the new marketplace realities. With the new Farm Act, program outlays will not balloon in some future year when supplies rebuild and prices plummet.

Under the 1996 Farm Act, more acreage is likely to be planted each year, and there could be a considerable amount of shifting among crops depending on relative market prices. While positive overall, this could have some adverse consequences for businesses (including farm cooperatives) involved in the production, marketing, and processing of certain specialized crops, especially in regions with higher costs.

Farm sector business volume is likely to grow with the increased use of land and with producers' incentive to maintain production flexibility. Greater land use is likely to lead to greater levels of farm lending. However, in the near term, windfall payments may reduce loan demand and/or result in some prepayments. In general, the delinking of benefits from market prices means a riskier lending environment, and this could cause lenders to raise their loan underwriting standards. Some borrowers will need to develop risk reducing strategies and tools (such as production contracts, yield futures, revenue insurance, etc.) in order to obtain favorable loan terms.

There will be strong competition to gain and retain lending relations with larger, well-managed producers. There may also be some deterioration in credit quality among the more poorly managed, higher cost producers. However, the new Farm Act is not expected to contribute to this deterioration in the near term.

Staffing and Travel

Question: Please provide the FTE's funded in the FY 96 appropriation for the Farm Credit Administration and the current on-board staffing level (FTE equivalent) in this agency.

Answer: The FCA FY 1996 budget includes funding for 384 full-time equivalents (FTEs). As of April 27, 1996, the current on-board staffing level was 360.

Question: What is your policy on detailing Farm Credit Administration personnel? Please provide a comprehensive list of all federal agency detailees to the FCA in the past year, the length of detail, the purpose of the detail, and the person's employing office.

Answer: FCA policy on detailing personnel to other Government agencies is that each individual request received is reviewed on a case-by-case basis and a determination regarding approval is based on the resource and staffing requirements of the FCA. There have been no Federal agency detailees to the FCA in the past year.

Question: Are employees of the Farm Credit Administration currently detailed to other federal agency offices? Please provide a comprehensive list of all FCA employees detailed in the past year, the length of detail, and the purpose of the detail.

Answer: Yes, Mary Barry, Management Analyst, Office of Inspector General, is presently detailed to the Inspector General Auditor Training Institute at Fort Belvoir, Virginia, for a 1-year period, beginning October 1, 1995, with the possibility of an extension of 1 additional year. Ms. Barry has been detailed as an instructor at the Institute.

Question: Please provide a detailed list of all foreign travel taken by the Chairman of the Farm Credit Administration, or any other employee of the Farm Credit Administration, including: duration, destination, cost, purpose, and account charged for cost of the travel.

Answer: During FY 1995, the FCA Chairman did not take any foreign travel. Eight employees traveled to Russia on behalf of the U.S. Government. Through programs initiated by the U.S. Agency for International Development (A.I.D.), and contracted through the Agricultural Cooperative Development International (ACDI), these employees provided various services and assistance to Russia's efforts to reorganize the collective farms of the former Soviet Union into cooperative style agricultural enterprises similar to those in the United States.

The ACDI paid the employees' travel and per diem expenses, as authorized by AID and in accordance with the Federal Travel Regulations. The FCA paid the salaries and benefits of these employees. In the aggregate, the salaries and benefits of these employees approximated \$42,000.

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